ENSOLUM

August 28, 2025

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2025 Closure Request Addendum
PLU Big Sinks 3-25-31 Battery
Incident Number nAB1731042349
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *2025 Closure Request Addendum* (*2025 Addendum*) to the *Closure Request Addendum* (*2023 Addendum*) dated September 25, 2023 and the original *Closure Request* dated October 23, 2018. This addendum provides an update to the delineation activities at the PLU Big Sinks 3-25-31 Battery (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the *2023 Addendum*. In the denial, NMOCD stated sample locations SS08 and SS09 exceeded Table 1 Closure Criteria for the top four feet of soil and should be addressed via remediation or deferral of remediation in areas where remediation could cause a major facility deconstruction as long as the impacts do not cause an imminent risk to human health, the environment, or ground water. Based on the additional delineation activities described below, XTO is again requesting closure for Incident Number nAB1731042349.

RELEASE BACKGROUND

The NMOCD permitting website has tracked the release location as Unit C, Section 3, Township 25 South, Range 31 East in Eddy County, New Mexico (32.165844, -103.7679062); however, this is the location of the well the release is associated with, Poker Lake Unit CVX JC BS #027H. The release is located in Unit A, Section 4, Township 25 South, Range 31 East, in Eddy County, New Mexico (32.164680°, -103.77774°), as documented on the original Release Notification and Corrective Action Form C-141 (Form C-141). The Site is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM). Please note that the Site is now referenced as Poker Lake Unit CVX JV BS #027H on the NMOCD permitting website.

On October 28, 2017, the fire tube gasket on the heater treater failed, resulting in the release of approximately 51 barrels (bbls) of oil and 6 bbls of produced water. The release affected approximately 2,300 square feet of the caliche well pad, approximately 2,300 square feet of the adjacent pasture, and misted approximately 7,000 square feet of pasture west of the Site. Approximately 36 bbls of oil and 4 bbls of produced water were recovered using a vacuum truck. Micro-Blaze® was applied to the offsite vegetation that was affected by the mist. XTO reported the release to the NMOCD on a Form C-141 on November 3, 2017. The release was assigned Remediation Permit (RP) Number 2RP-4470 and Incident Number nAB1731042349.

The release was included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement was to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

Between July 2018 and October 2018, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the October 28, 2017, crude oil and produced water release. Approximately 3,600 square feet of soil ranging in depth from 1 foot to 4 feet below ground surface (bgs) was excavated from the pasture west of the pad. Soil samples SW01 through SW06, FS01, FS02, and FS04 were collected from the sidewalls and the floor of the pasture excavation. Delineation samples SS01 through SS03 were collected in the pasture outside of the excavation to confirm there were no remaining impacts to the areas where Micro-Blaze® was applied. An area of approximately 450 square feet of soil ranging in depth from 0.5 foot to 1.5 feet bgs was removed from the well pad using a hydro-vacuum. Excavation floor soil samples SS04, SS05, and SS09 and delineation soil samples SS06 through SS08 and SS10 were collected from the well pad. Using the NMOCD 1993 *Guidelines for Leaks, Spills, and Releases*, confirmation soil samples were compliant with the NMOCD Closure Criteria, except for soil sample SS07, which exceeded the NMOCD reclamation requirement for chloride in the top four feet of soil. XTO's safety policy restricted soil disturbing activities to a 3-foot radius of process equipment. This policy was enforced along the eastern edge of the excavation where impacted soil was identified within three feet of a meter and the heater treater. The excavation was advanced to three feet from the equipment by hydro-vacuum and hand digging methods to remove as much impacted soil as possible around soil sample SS07. Delineation soil samples SS11 through SS13 were collected to define impacts at SS07, and laboratory analytical results reported chloride concentrations compliant with the reclamation requirement. Closure was requested on October 23, 2018, based on laboratory analytical results for the delineation and excavation soil samples compliant with the NMOCD Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the October 23, 2018, *Closure Request*.

On March 24, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1731042349 for following reason:

- *The depth to groundwater has not been adequately determined. 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 in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

The NMOCD preference for wells used for depth to groundwater determination to be no further than 0.5 miles away from the Site with data less than 25 years old was not in place at the time of the original soil sampling and reporting activities. The original *Closure Request* was submitted on October 23, 2018, prior to the September 6, 2019, publication of the Procedures for Implementation of the Spill Rule guidance document that clarified the depth to groundwater determination preferences (Section IX.a.).

In response to the denial, XTO submitted a *Remediation Work Plan* (*Work Plan*) to the NMOCD on June 29, 2023. The *Work Plan* proposed to install a soil boring within 0.5 miles of the Site to investigate depth to groundwater and confirm the Closure Criteria at the Site. The *Work Plan* was approved by the NMOCD on June 29, 2023.

As outlined in the June 29, 2023 *Work Plan*, XTO installed a soil boring for determination of groundwater depth and confirmation of the Closure Criteria in August 2023. The depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site was confirmed. The Closure Criteria for the Site was reassessed using Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Upon review of the

2018 soil sample analytical results, one assessment soil sample (SS08) was identified with a total petroleum hydrocarbons (TPH) concentration exceeding the Closure Criteria of 2,500 milligrams per kilogram (mg/kg). The TPH concentration of 2,630 mg/kg, identified in soil sample SS08 collected at 1-foot bgs in July 2018, was compliant with the remediation action level for TPH of 5,000 mg/kg applied at the time under the NMOCD 1993 *Guidelines for Leaks, Spills, and Releases*. In August 2023, one soil sample (SS08) was collected via hand auger at a depth of 1-foot bgs at the original SS08 soil sample location, and laboratory analytical results reported all constituents of concern (COC) concentrations were compliant with the new Closure Criteria. On September 25, 2023, XTO requested closure of this release in the *2023 Addendum*. Both the *Closure Request* and the *2023 Addendum* are included as Appendix A.

On October 17, 2023, the NMOCD denied the *2023 Addendum* for Incident Number nAB1731042349 for the following reason:

- *All areas not reasonably needed for production or subsequent drilling operations must be 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. Samples SS08 and SS09 exceed Table I closure criteria for the top four feet. Remediation on an active site can be deferred in areas immediately under or around production equipment such as production tanks, wellheads, and pipelines where remediation could cause a major facility deconstruction so long as the contamination is fully delineated and does not cause an imminent risk to human health, the environment, or ground water. The deferral request must specify which sample points are being requested for deferral including an explanation why the contaminants can't be removed.*

CLOSURE CRITERIA

Receptors used to determine the Closure Criteria for the Site are illustrated on Figure 1. Well permit C-01914 is located closer to the Site than the newly installed well C-04762 discussed above that reported a depth to groundwater of greater than 100 feet bgs. Review of well permit C-01914 revealed that the well was never installed (Appendix B). Based on the results of the Site Characterization presented in the *2023 Addendum*, the following NMOCD Table I Closure Criteria were applied:

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release. Additionally, impacts on-pad must be delineated to the reclamation requirement, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following Site decommissioning.

ADDITIONAL DELINEATION AND RESAMPLING SOIL ACTIVITIES

Following the denial of the *2023 Addendum*, the 2018 soil sampling results were again reviewed to determine areas that exceed the reclamation requirement. Previous soil sampling locations SS07 at 0.5 feet bgs, SS08 at 1 foot bgs, and SS09 at 1.5 feet bgs were identified as exceeding the reclamation requirement for TPH and/or chloride and were re-sampled on February 16, 2024. The soil samples were collected using a hand auger and were field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

Results were recorded on lithologic/soil sampling logs (Appendix B). The samples were placed directly into a pre-cleaned glass jar, 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 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.

Laboratory analytical results for soil samples SS07 through SS09 collected in 2024 reported COC concentrations compliant with the Closure Criteria; however, all three sampling locations reported TPH levels above the reclamation requirement. On June 27, 2025, additional soil samples were collected to vertically delineate previous sampling locations SS07 through SS09 and laterally delineate impacts north of SS08. Samples were collected from SS07A/SS07B at 1 foot and 2 feet bgs, SS08A at 2 feet bgs, SS09A at 2 feet bgs, and SS14A/SS14B/SS14C at 1 foot, 2 feet and 3 feet bgs. Each boring was advanced until refusal using a hydro-vacuum. The discrete samples were collected, screened, and submitted to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico for analysis using the above-described methodologies, except chloride, which was analyzed utilizing Standard Method SM4500.

The soil sampling locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are presented on Figure 2. Lithologic/soil sampling logs for the 2024 and 2025 sampling events are attached as Appendix C. A photographic log of 2024 and 2025 sampling activities is included as Appendix D.

LABORATORY ANALYTICAL RESULTS

Following excavation and sampling activities, laboratory analytical results confirm that impacted soil exceeding Closure Criteria was removed and waste-containing soil was fully defined to the reclamation requirement as requested by NMOCD in the *2023 Addendum* denial response. The current and historical laboratory analytical results are summarized on Table 1, and the 2024 and 2025 laboratory analytical reports are included in Appendix E.

CLOSURE REQUEST

Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address impacted soil resulting from the October 28, 2017, release of crude oil and produced water. Following excavation both on-pad and in the pasture west of the pad, laboratory analytical results from delineation and confirmation sampling indicate that all COC concentrations were in compliance with the appropriate Closure Criteria and on-pad waste-containing soil were fully defined to the reclamation standard in the top 2 feet.

Due to the presence of multiple utilities at the active Site, the release was remediated on-pad to Closure Criteria for safety reasons. Approximately 1,400 square feet of waste-containing soil was delineated within the top 2 feet and is present at sample locations SS07 through SS09. Following Site decommissioning, an estimated 104 cubic yards of waste-containing soil will be reclaimed. The presence of the waste-containing soil present on-pad does not cause an imminent risk to human health, the environment, or groundwater. XTO will reclaim this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria during final Site reclamation.

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

address all deficiencies as noted in the *2023 Addendum* denial response. XTO respectfully requests a deferral for samples SS07, SS08, and SS09 and no further action (NFA) for Incident Number nAB1731042349.

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, MS
Associate Principal

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

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation and Excavation Soil Sample Locations
Table 1	Soil Sample Analytical Results
Appendix A	September 25, 2023 *Closure Request Addendum*
Appendix B	Well Permit C-01914
Appendix C	Lithologic/Soil Sampling Logs (2024 and 2025)
Appendix D	Photographic Log (2024 and 2025)
Appendix E	Laboratory Analytical Reports & Chain-of-Custody Documentation (2024 and 2025)

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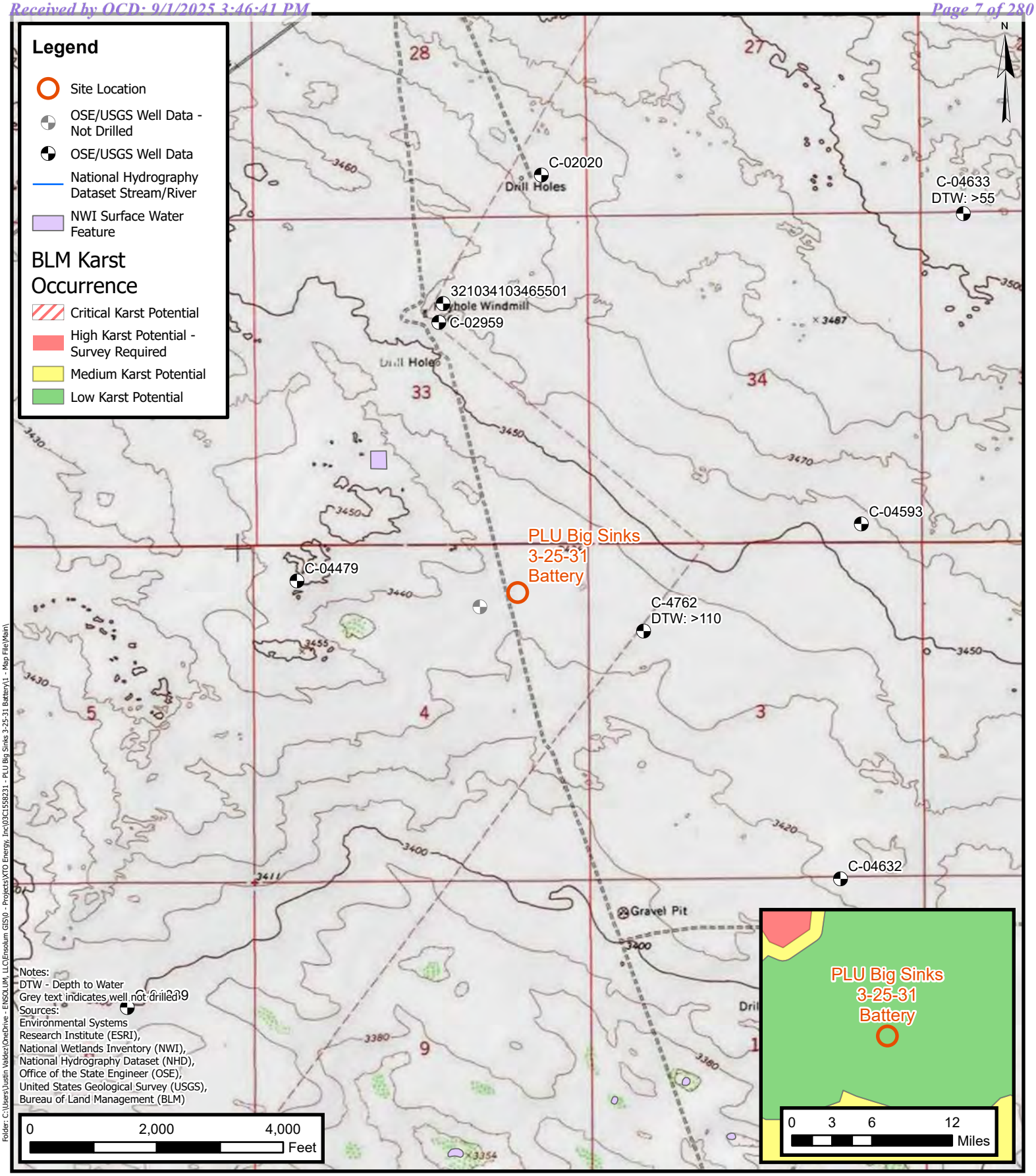
FIGURES



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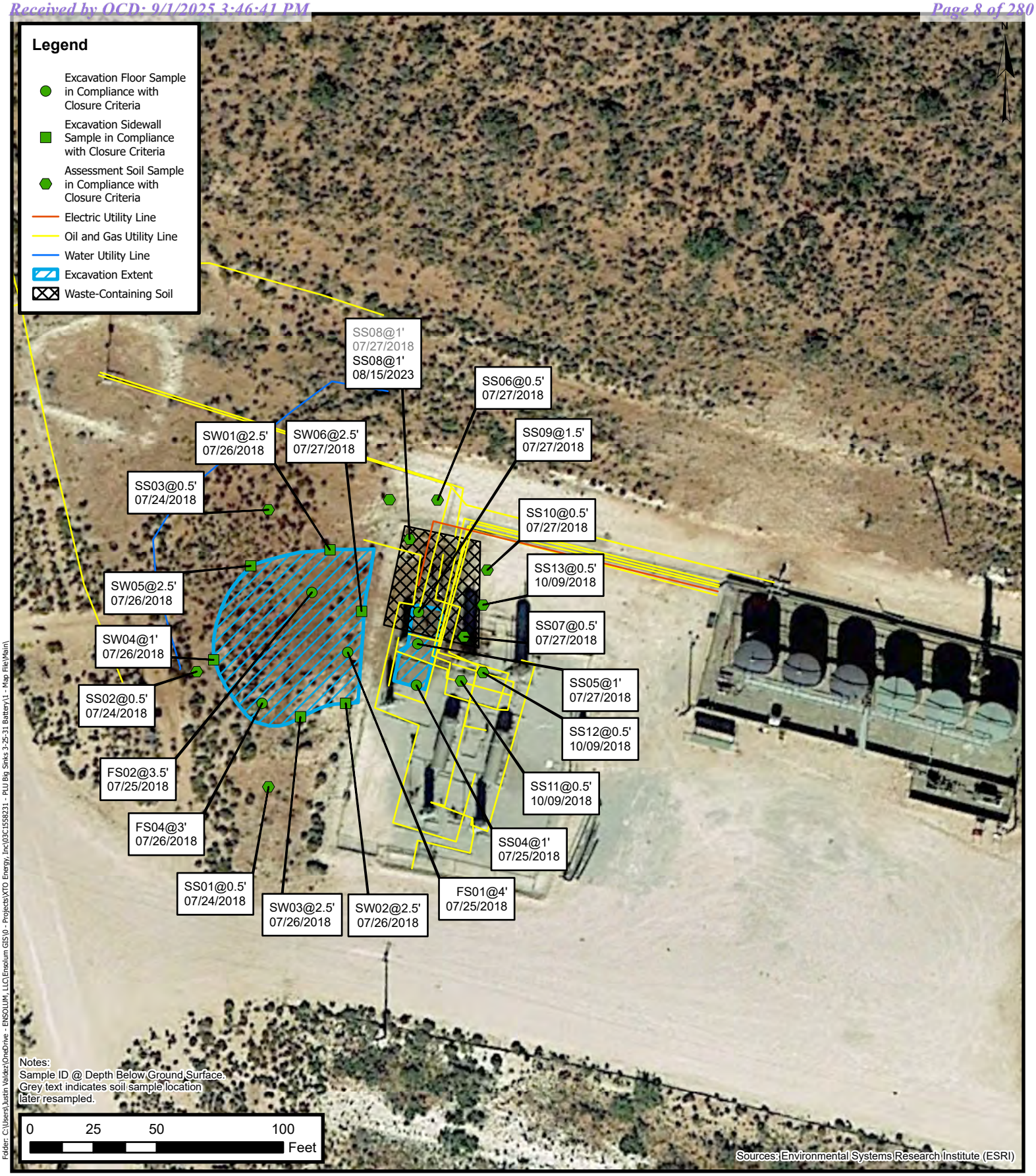
Site Receptor Map

XTO Energy, Inc.
PLU Big Sinks 3-25-31 Battery
Incident Number: Incident Number nAB1731042349
Unit A, Section 4, Township 25 South, Range 31 East
New Mexico

FIGURE 1



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Delineation and Excavation Soil Sample Locations

XTO Energy, Inc.
PLU Big Sinks 3-25-31 Battery
Incident Number: nAB1731042349
Unit A, Section 4, Township 25 South, Range 31 East
Eddy County, New Mexico

FIGURE 2

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Big Sinks 3-25-31 Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
SS01	07/24/2018	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS02	07/24/2018	0.5	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	20.0
SS03	07/24/2018	0.5	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97
SS06	07/27/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.6
SS07	07/27/2018	0.5	<0.00199	<0.00199	<15.0	753	<15.0	753	753	1,100
SS07	02/16/2024	0.5	<00.202	<0.00404	<50.4	462	<50.4	462	462	69.4
SS07A	06/27/2025	1.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS07B	06/27/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS08	07/27/2018	1.0	<0.00202	0.0282	73.8	2,510	43.8	**2,580**	**2,630**	40.7
SS08	08/15/2023	1.0	<0.00200	<0.00400	<49.7	567	88.4	567	655	124
SS08	02/16/2024	1.0	<0.00200	<0.00399	<50.5	591	<50.5	591	591	102
SS08A	06/27/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SS10	07/27/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.92
SS11	10/09/2018	0.5	<0.0100	<0.0100	17.7	<15.0	<15.0	17.7	17.7	<4.98
SS12	10/09/2018	0.5	<0.00202	<0.00202	25.8	<15.0	<15.0	25.8	25.8	<4.96
SS13	10/09/2018	0.5	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	16.1	<5.00
SS14A	06/27/2025	1.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SS14B	06/27/2025	2.0	<0.050	<0.300	<10.0	18.0	<10.0	18.0	18.0	32.0
SS14C	06/27/2025	3.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
Excavation Floor Soil Samples										
FS01	07/25/2018	4.0	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	221
FS02	07/25/2018	3.5	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	30.7
FS04	07/26/2018	3.0	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.1
SS04	07/25/2018	1.0	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	12.3
SS05	07/27/2018	1.0	<0.00199	<0.00199	<14.9	77.3	<14.9	77.3	77.3	149
SS09	07/27/2018	1.5	<0.00201	0.0328	82.4	605	20.4	687	708	393
SS09	02/16/2024	1.5	<0.00198	<0.00396	<49.9	194	<49.9	194	194	86.7
SS09A	06/27/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
Excavation Sidewall Soil Samples										
SW01	07/26/2018	2.5	<0.00201	<0.00201	<15.0	16.8	<15.0	16.8	16.8	26.7
SW02	07/26/2018	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Big Sinks 3-25-31 Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			**10**	**50**	**NE**	**NE**	**NE**	**1,000**	**2,500**	**20,000**
SW03	07/26/2018	2.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SW04	07/26/2018	1.0	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW05	07/26/2018	2.5	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	9.04
SW06	07/26/2018	2.5	<0.00199	<0.00199	<14.9	50.9	<14.9	50.9	50.9	159

Notes:

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

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
TPH: Total Petroleum Hydrocarbon
Grey text indicates soil sample location was later re-sampled.

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APPENDIX A

September 25, 2023
Closure Request Addendum

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September 25, 2023

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

Re: Closure Request Addendum
PLU Big Sinks 3-25-31 Battery
Incident Number nAB1731042349
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following addendum to the original *Closure Request* dated October 23, 2018. This addendum provides an update to the depth to groundwater determination activities at the PLU Big Sinks 3-25-31 Battery (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the October 23, 2018, *Closure Request*. In the denial, NMOCD indicated that the depth to groundwater assessment was not sufficient. Based on the additional depth to groundwater determination activities described below, XTO is submitting this *Closure Request Addendum* and requesting closure for Incident Number nAB1731042349.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A, Section 4, Township 25 South, Range 31 East, in Eddy County, New Mexico (32.164680°, -103.77774°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On October 28, 2017, the fire tube gasket on the heater treater failed, resulting in the release of approximately 51 barrels (bbls) of oil and 6 bbls of produced water. The release affected approximately 2,300 square feet of the caliche well pad, approximately 2,300 square feet of the adjacent pasture, and misted approximately 7,000 square feet of pasture west of the Site. Approximately 36 bbls of oil and 4 bbls of produced water were recovered using a vacuum truck. Micro-Blaze® was applied to the offsite vegetation that was affected by the mist. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on November 3, 2017. The release was assigned Remediation Permit (RP) Number 2RP-4470 and Incident Number nAB1731042349.

The release was included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement was to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of 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.

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

BACKGROUND

Between July 2018 and October 2018, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the October 28, 2017, crude oil and produced water release. The delineation and excavation soil sample locations are presented on Figure 2 and the laboratory analytical results are summarized on Table 1. Closure was requested on October 23, 2018, based on laboratory analytical results for the delineation and excavation soil samples compliant with the NMOCD site-specific remediation action levels and/or the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the October 23, 2018, *Closure Request*.

On March 24, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1731042349 for following reason:

- *The depth to groundwater has not been adequately determined. 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 in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

The NMOCD *preference* for wells used for depth to groundwater determination to be no further than 0.5 miles away from the site with data less than 25 years old was not in place at the time of the original soil sampling and reporting activities. The original *Closure Request* was submitted on October 23, 2018, prior to the September 6, 2019, publication of the Procedures for Implementation of the Spill Rule guidance document that clarified the depth to groundwater determination preferences (Section IX.a.).

In response to the denial, XTO submitted a *Remediation Work Plan* (*Work Plan*) to the NMOCD on June 29, 2023. The *Work Plan* proposed to install a soil boring within 0.5 miles of the Site to investigate depth to groundwater and confirm the Closure Criteria at the Site. The *Work Plan* was approved by the NMOCD on June 29, 2023.

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

As outlined in the June 29, 2023 *Work Plan*, XTO proceeded with the installation of a soil boring for determination of groundwater depth and confirmation of the Site Closure Criteria. During August 2023, a borehole, permitted as New Mexico Office of the State Engineer (NMOSE) well C-04762, was advanced to a depth of 110 feet bgs via air rotary drill rig. The borehole was located approximately 0.38 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 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 A.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the Table I Closure Criteria identified above are appropriate for protection of groundwater at this Site.

ADDITIONAL SOIL SAMPLING ACTIVITIES

Upon review of the 2018 soil sample analytical results, one assessment soil sample (SS08@1') was identified with a TPH concentration exceeding the Site Closure Criteria of 2,500 mg/kg. The TPH concentration of 2,630 mg/kg, identified in soil sample SS08@1' during July 2018, was compliant with the remediation action level for TPH of 5,000 mg/kg applied at the time under the NMOCD 1993 Guidelines for Leaks, Spills, and Releases.

On August 15, 2023, Ensolum personnel were at the Site to complete soil sampling activities to assess for the presence or absence of residual TPH impacted soil identified at the July 2018 SS08@1' soil sample location. One soil sample (SS08) was collected via hand auger at a depth of 1-foot bgs at the original SS08@1' soil sample location. The soil sample was placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for soil sample SS08 indicated that all COC concentrations were compliant with the Site Closure Criteria. The soil sample location is presented on Figure 2 and the laboratory analytical results are summarized on Table 1. The complete laboratory analytical report is included as Appendix B.

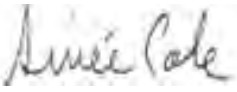
CLOSURE REQUEST

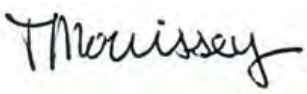
Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the October 28, 2017, release of crude oil and produced water. Based on laboratory analytical results for the final excavation and delineation soil samples compliant with the Site Closure 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. XTO believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number nAB1731042349. NMOCD sampling notifications are included as Appendix C and the October 23, 2018, Closure Request is included as Appendix D.

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

Sincerely,
Ensolum, LLC





Aimee Cole
Senior Managing Scientist

Tacoma Morrissey
Senior Geologist

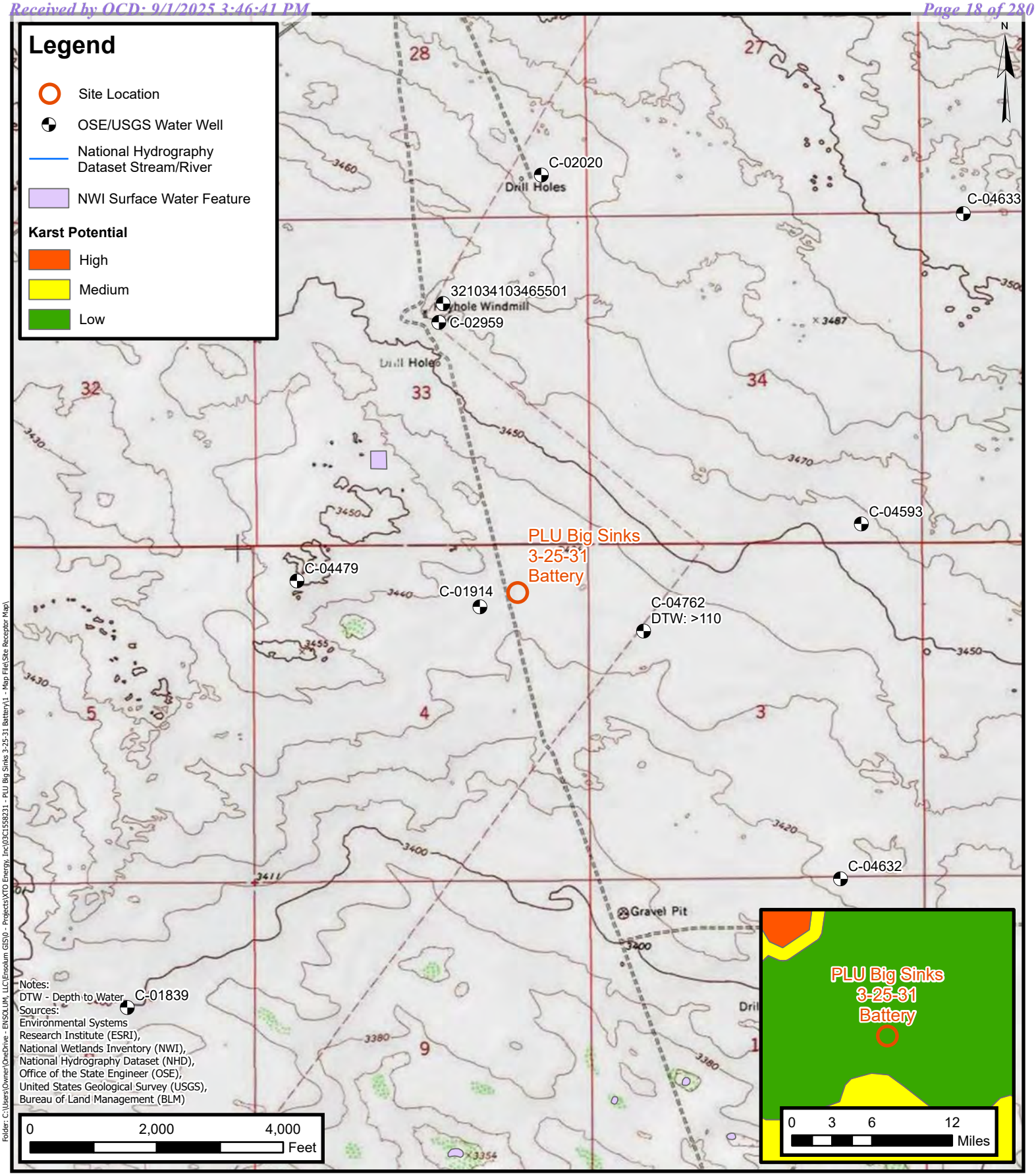
cc: Garrett Green, XTO
Tommee Lambert, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation and Excavation Soil Sample Locations (2018/2023)
Table 1	Soil Sample Analytical Results (2018/2023)
Appendix A	Referenced Well Records
Appendix B	Laboratory Analytical Reports & Chain-of-Custody Documentation (2023)
Appendix C	NMOCD Notifications
Appendix D	October 23, 2018 Closure Request

ENSOLUM

FIGURES



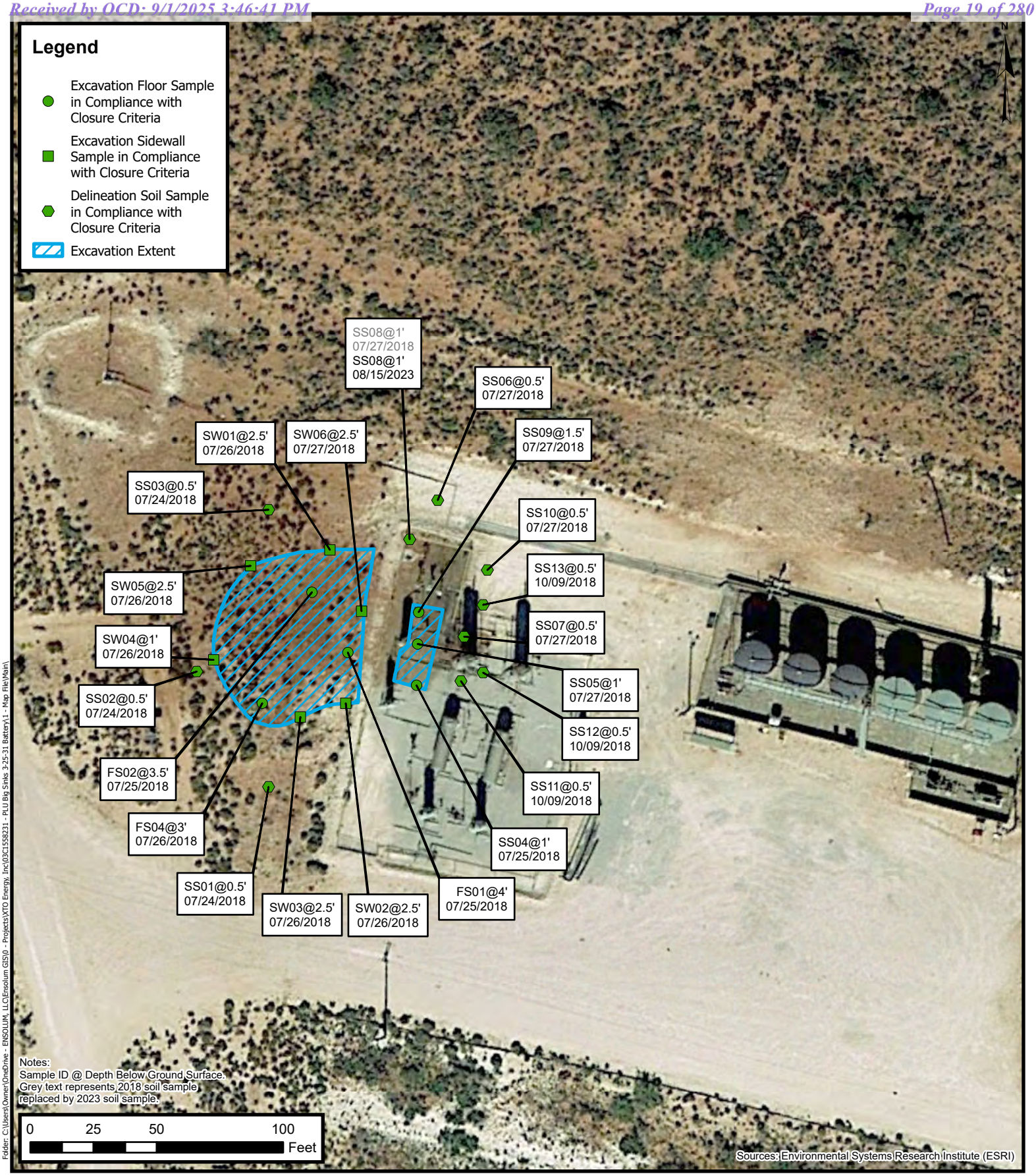
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558231 - PLU Big Sinks 3-25-31 Battery\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
PLU Big Sinks 3-25-31 Battery
Incident Number: nAB1731042349
Unit A, Section 4 ,Township 25 South, Range 31 East
Eddy County, New Mexico

FIGURE 1



ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation and Excavation Soil Sample Locations

XTO Energy, Inc.
PLU Big Sinks 3-25-31 Battery
Incident Number: nAB1731042349
Unit A, Section 4, Township 25 South, Range 31 East
Eddy County, New Mexico

FIGURE 2

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU Big Sinks 3-25-31 Battery
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Assessment Soil Samples										
SS01*	7/24/2018	0.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS02*	7/24/2018	0.5	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	20.0
SS03*	7/24/2018	0.5	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97
SS06	7/27/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.6
SS07	7/27/2018	0.5	<0.00199	<0.00199	<15.0	753	<15.0	753	753	1,100
SS08	7/27/2018	1.0	<0.00202	0.0282	73.8	2510	43.8	2,580	2,630	40.7
SS08	8/15/2023	1.0	<0.00200	<0.00400	<49.7	567	88.4	567	655	124
SS10	7/27/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.92
SS11	10/9/2018	0.5	<0.0100	<0.0100	17.7	<15.0	<15.0	17.7	17.7	<4.98
SS12	10/9/2018	0.5	<0.00202	<0.00202	25.8	<15.0	<15.0	25.8	25.8	<4.96
SS13	10/9/2018	0.5	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	16.1	<5.00
Excavation Floor Soil Samples										
FS01*	7/25/2018	4.0	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	221
FS02*	7/25/2018	3.5	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	30.7
FS04*	7/26/2018	3.0	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.1
SS04	7/25/2018	1.0	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	12.3
SS05	7/27/2018	1.0	<0.00199	<0.00199	<14.9	77.3	<14.9	77.3	77.3	149
SS09	7/27/2018	1.5	<0.00201	0.0328	82.4	605	20.4	687	708	393
Excavation Sidewall Soil Samples										
SW01*	7/26/2018	2.5	<0.00201	<0.00201	<15.0	16.8	<15.0	16.8	16.8	26.7
SW02*	7/26/2018	2.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW03*	7/26/2018	2.5	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SW04*	7/26/2018	1.0	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW05*	7/26/2018	2.5	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	9.04
SW06*	7/26/2018	2.5	<0.00199	<0.00199	<14.9	50.9	<14.9	50.9	50.9	159

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

Grey text indicates 2018 soil sample location that was re-sampled in 2023.

*indicates sample was collected in area to be reclaimed after remediation is complete; reclamation standard in the top 4 feet is 600 mg/kg for chloride and 100 mg/kg for TPH.

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APPENDIX A

Referenced Well Records

ENSOLUM

	Sample Name: BH01/C-04762	Date: 8/09/2023
	Site Name: PLU Big Sinks 3-25-31 Battery	
	Incident Number: nAB1731042349	
	Job Number: 03C1558231	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: M. O'Dell/S. Welvang	Method: Air Rotary Rig
Coordinates: 32.162944, -103.771325	Hole Diameter: 5 1/4"	Total Depth: 110'
Comments: No field screenings were 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 with trace sand. Tan to white caliche, red sand, very fine to medium grained, subrounded to subangular, well graded, dry.
						20	SP	10-20'. Sand with trace caliche. reddish brown, very fine to fine grained, poorly graded, subrounded to subangular grains, dry.
						30	SP	30-110'. Sand, rust color (reddish orange), very fine to fine grained, poorly graded, subangular to subrounded, dry.
						40		
						50		
						60		~60'. Injecting soapy water mixture
						70		
						80		@ 75' bgs, hole collapsed due to sandy conditions. No evidence of water throughout drilling process.
						90		
						100		
						110		110'. Drilling stopped.

Total Depth @ 110'.

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: 749283
File Nbr: C 04762

Jul. 25, 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,

Rodolfo Chavez
(575)622-6521

Enclosure

explore

File No. C-04762 POD1

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: 7/20/2023 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 11:21

FOR OSE INTERNAL USE — Application for Permit, Form WR-07, Rev 11/17/16

File No.: C-04762	Tm. No.: 749263	Receipt No.: 2-45957
Trans Description (optional)		
Sub-Basin: CUB	PCW/LOG Due Date: 7/25/24	

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
BH01 C-04762 POD1	-103.77133	32.16299	Unit E, Sec 03, T25S, R31E, 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 an off-pad area near caliche access road (32.16299, -103.77133).

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 11:21

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-04762 POD 1	Trn No.: 749783

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.	☐ 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.	☐ 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.	**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 10:34:00 -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 25th day of July 20 23, for the State Engineer,

Mike A. Hamman, P.E., State Engineer

OSE DII JUL 7 2023 AM 11:21

By: K. Parekh
Signature

Kashyap Parekh
Print

Title: Water Resource Manager I
Print

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: C-04762 POD1	Trn No.: 749283

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 04762 POD1

File Number: C 04762
Trn Number: 749283

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.

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion C 04762 POD1 must be completed and the Well Log filed on or before 07/24/2024.

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 25 day of Jul A.D., 2023

Mike A. Hamman, P.E., State Engineer

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04762 POD1

File Number: C 04762
Trn Number: 749283

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-4762-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-4762-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4762-POD1	8.0 (Soil Boring)	110	Unknown	32° 9' 46.76"	103° 46' 16.78''

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

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-4762-POD1

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, 9 min, 46.76 sec
Longitude: 103 deg, 46 min, 16.78 sec, NAD 83

OSE DIT JUL 7 2023 AM 11:21

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 11:21

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 10:33:20 -04'00'

Signature of Applicant Date

IX. ACTION OF THE STATE ENGINEER:

OSE OIT JUL 7 2023 AM 11:21

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. Hanman 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

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

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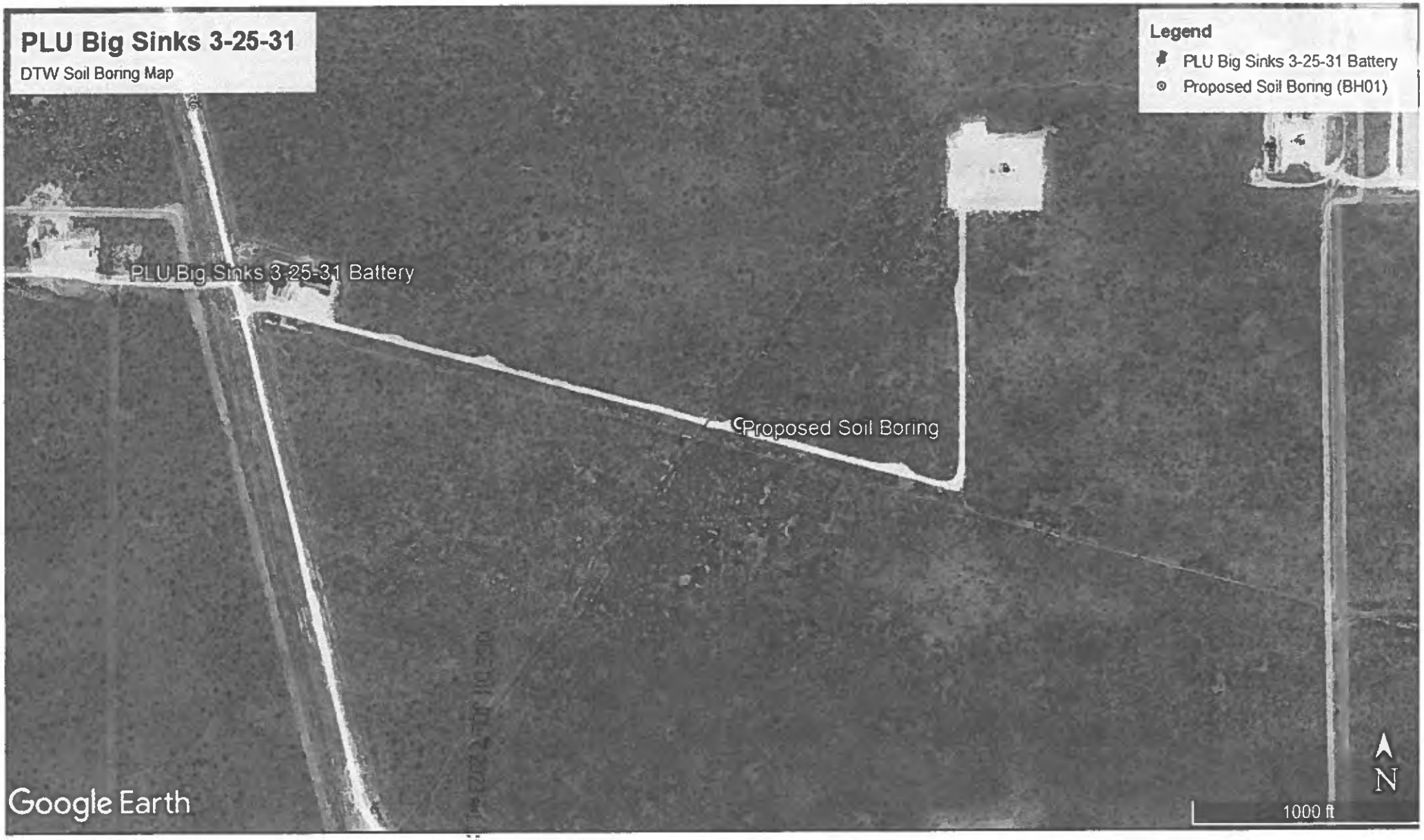

PLU Big Sinks 3-25-31
DTW Soil Boring Map
Legend
PLU Big Sinks 3-25-31 Battery
Proposed Soil Boring (BH01)
PLU Big Sinks 3-25-31 Battery
Proposed Soil Boring
Google Earth
1000 ft
N

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 DII JUL 7 2023 AM 11:21

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 BS 30H
30-015-39930
32.192389, -103.780346
Eddy County, New Mexico

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 I/II 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 11:26:30 -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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No. NMNM105561215

6. If Indian, Allottee or Tribe Name

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 BS #030H

2. Name of Operator XTO Energy. Inc.

9. API Well No. 30-015-42496 (nearest active well)

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)*
F-03-25S-31E, Latitude 32.162730, Longitude -103.770003

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 requests access to an off pad area near the Poker Lake Unit CVX JV BS #030H well pad (32.1658, -103.7680) in order to complete a soil boring. The soil boring will be completed to a depth of approximately 110 feet below ground surface for determination of regional groundwater depth. The soil boring will be located in an off pad area near an active lease road (32.162730, -103.770003). 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 nearby wells and proposed soil boring location are included with this Form 3160.

OSE DII JUL 7 2023 AM 11:21

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)* Garrett Green

Title SSHE Coordinator

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 10:50:35 -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

PLU Big Sinks 3-25-31 Battery

32.162730, -103.770003
Surface Owner: BLM

ENSOLUM

APPENDIX B

Laboratory Analytical Report & Chain-of-Custody Documentation (2023)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/25/2023 11:54:08 AM

JOB DESCRIPTION

PLU Bg Sinks 3-25-31 Battery
SDG NUMBER 03C1558231

JOB NUMBER

890-5100-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

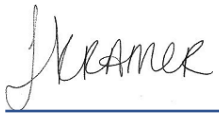
Eurofins Carlsbad

Job Notes

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

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

Authorization



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8/25/2023 11:54:08 AM

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

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Laboratory Job ID: 890-5100-1
SDG: 03C1558231

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Job ID: 890-5100-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-5100-1

Receipt
The sample was received on 8/15/2023 3:02 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

Receipt Exceptions
The following sample was received and analyzed from an unpreserved bulk soil jar: SS08 (890-5100-1).

GC VOA
Method 8021B: The continuing calibration verification (CCV) associated with batch 880-60963 recovered below the lower control limit for Benzene, Toluene, Ethylbenzene, m-Xylene & p-Xylene and o-Xylene. An acceptable CCV was ran within the 12 hour window, therefore the data has been qualified and reported. The associated sample is impacted: (CCV 880-60963/20).

Method 8021B: Spike compounds were inadvertently omitted during the extraction process for the matrix spike duplicate (MSD); therefore, matrix spike recoveries are unavailable for preparation batch 880-61015 and analytical batch 880-60963. The associated laboratory control sample (LCS) met acceptance criteria.

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 880-60930 and analytical batch 880-60956 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (CCV 880-60956/20), (CCV 880-60956/31) and (CCV 880-60956/5). 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 for preparation batch 880-60457 and analytical batch 880-60463 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.The associated samples are: SS08 (890-5100-1), (890-5099-A-11-A), (890-5099-A-11-B MS) and (890-5099-A-11-C MSD).

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 Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Client Sample ID: SS08

Date Collected: 08/15/23 13:00
Date Received: 08/15/23 15:02
Sample Depth: 1

Lab Sample ID: 890-5100-1

Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 09:36	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 09:36	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 09:36	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/23 13:35	08/25/23 09:36	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 09:36	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/23 13:35	08/25/23 09:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*08/24/23 13:35*	*08/25/23 09:36*	*1*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*	*08/24/23 13:35*	*08/25/23 09:36*	*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			08/25/23 09:38	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**655**		49.7		mg/Kg			08/25/23 11:26	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		08/23/23 16:00	08/24/23 19:04	1
Diesel Range Organics (Over C10-C28)	**567**		49.7		mg/Kg		08/23/23 16:00	08/24/23 19:04	1
Oil Range Organics (Over C28-C36)	**88.4**		49.7		mg/Kg		08/23/23 16:00	08/24/23 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*101*		*70 - 130*	*08/23/23 16:00*	*08/24/23 19:04*	*1*
o-Terphenyl	*98*		*70 - 130*	*08/23/23 16:00*	*08/24/23 19:04*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**124**		5.04		mg/Kg			08/17/23 18:32	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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)
880-32063-A-1-E MS	Matrix Spike	96	91
880-32063-A-1-F MSD	Matrix Spike Duplicate	107	117
890-5100-1	SS08	84	91
LCS 880-61015/1-A	Lab Control Sample	89	96
LCSD 880-61015/2-A	Lab Control Sample Dup	91	96
MB 880-60970/5-A	Method Blank	95	112
MB 880-61015/5-A	Method Blank	101	119

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)
890-5100-1	SS08	101	98
890-5137-A-1-E MS	Matrix Spike	125	114
890-5137-A-1-F MSD	Matrix Spike Duplicate	124	112
LCS 880-60930/2-A	Lab Control Sample	123	129
LCSD 880-60930/3-A	Lab Control Sample Dup	122	129
MB 880-60930/1-A	Method Blank	162 S1+	175 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-60970/5-A
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 60970

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/23 09:32	08/24/23 13:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/23 09:32	08/24/23 13:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/23 09:32	08/24/23 13:28	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/23 09:32	08/24/23 13:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/23 09:32	08/24/23 13:28	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/23 09:32	08/24/23 13:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*08/24/23 09:32*	*08/24/23 13:28*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*08/24/23 09:32*	*08/24/23 13:28*	*1*

Lab Sample ID: MB 880-61015/5-A
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 61015

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 01:50	1
Toluene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 01:50	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 01:50	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		08/24/23 13:35	08/25/23 01:50	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		08/24/23 13:35	08/25/23 01:50	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		08/24/23 13:35	08/25/23 01:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*08/24/23 13:35*	*08/25/23 01:50*	*1*
1,4-Difluorobenzene (Surr)	*119*		*70 - 130*	*08/24/23 13:35*	*08/25/23 01:50*	*1*

Lab Sample ID: LCS 880-61015/1-A
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 61015

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1050		mg/Kg		105	70 - 130		
Toluene			0.100	0.1056		mg/Kg		106	70 - 130		
Ethylbenzene			0.100	0.1016		mg/Kg		102	70 - 130		
m-Xylene & p-Xylene			0.200	0.2027		mg/Kg		101	70 - 130		
o-Xylene			0.100	0.09374		mg/Kg		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 880-61015/2-A
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61015

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08366		mg/Kg		84	70 - 130	23	35

QC Sample Results

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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

Lab Sample ID: LCSD 880-61015/2-A
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 61015

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.08230		mg/Kg		82	70 - 130	25	35
Ethylbenzene			0.100	0.07421		mg/Kg		74	70 - 130	31	35
m-Xylene & p-Xylene			0.200	0.1453		mg/Kg		73	70 - 130	33	35
o-Xylene			0.100	0.07020		mg/Kg		70	70 - 130	29	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*

Lab Sample ID: 880-32063-A-1-E MS
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 61015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00198	U F1	0.0996	0.07900		mg/Kg		79	70 - 130
Toluene	0.00303	F1	0.0996	0.07784		mg/Kg		75	70 - 130
Ethylbenzene	<0.00198	U F1 F2	0.0996	0.07456		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.199	0.1556		mg/Kg		77	70 - 130
o-Xylene	<0.00198	U F1 F2	0.0996	0.07334		mg/Kg		73	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 880-32063-A-1-F MSD
Matrix: Solid
Analysis Batch: 60963

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 61015

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00198	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130	NC	35
Toluene	0.00303	F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130	NC	35
Ethylbenzene	<0.00198	U F1 F2	0.101	<0.00202	U F1 F2	mg/Kg		-0.4	70 - 130	197	35
m-Xylene & p-Xylene	<0.00396	U F1 F2	0.202	<0.00403	U F1 F2	mg/Kg		0.6	70 - 130	194	35
o-Xylene	<0.00198	U F1 F2	0.101	<0.00202	U F1 F2	mg/Kg		0.9	70 - 130	192	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*

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

Lab Sample ID: MB 880-60930/1-A
Matrix: Solid
Analysis Batch: 60956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 60930

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		08/23/23 16:00	08/24/23 08:11	1

QC Sample Results

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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

Lab Sample ID: MB 880-60930/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 60956 — **Prep Batch: 60930**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		08/23/23 16:00	08/24/23 08:11	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		08/23/23 16:00	08/24/23 08:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*162*	*S1+*	*70 - 130*	*08/23/23 16:00*	*08/24/23 08:11*	*1*
o-Terphenyl	*175*	*S1+*	*70 - 130*	*08/23/23 16:00*	*08/24/23 08:11*	*1*

Lab Sample ID: LCS 880-60930/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 60956 — **Prep Batch: 60930**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	1010		mg/Kg		101	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	1087		mg/Kg		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*123*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Lab Sample ID: LCSD 880-60930/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 60956 — **Prep Batch: 60930**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1006		mg/Kg		101	70 - 130	0	20
Diesel Range Organics (Over C10-C28)			1000	998.9		mg/Kg		100	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*122*		*70 - 130*
o-Terphenyl	*129*		*70 - 130*

Lab Sample ID: 890-5137-A-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 60956 — **Prep Batch: 60930**

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	996	1110		mg/Kg		109	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.1	U	996	1043		mg/Kg		102	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*125*		*70 - 130*
o-Terphenyl	*114*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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

Lab Sample ID: 890-5137-A-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 60956 — **Prep Batch: 60930**

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	996	977.4		mg/Kg		96	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	<50.1	U	996	1037		mg/Kg		101	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*124*		*70 - 130*
o-Terphenyl	*112*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-60457/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60463

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			08/17/23 17:15	1

Lab Sample ID: LCS 880-60457/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60463

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	274.8		mg/Kg		110	90 - 110		

Lab Sample ID: LCSD 880-60457/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60463

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	272.6		mg/Kg		109	90 - 110	1	20

Lab Sample ID: 890-5099-A-11-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60463

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	60.5	F1	251	354.6	F1	mg/Kg		117	90 - 110		

Lab Sample ID: 890-5099-A-11-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 60463

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	60.5	F1	251	354.8	F1	mg/Kg		117	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

GC VOA

Analysis Batch: 60963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	8021B	61015
MB 880-60970/5-A	Method Blank	Total/NA	Solid	8021B	60970
MB 880-61015/5-A	Method Blank	Total/NA	Solid	8021B	61015
LCS 880-61015/1-A	Lab Control Sample	Total/NA	Solid	8021B	61015
LCSD 880-61015/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	61015
880-32063-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	61015
880-32063-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	61015

Prep Batch: 60970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-60970/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 61015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	5035	
MB 880-61015/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-61015/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-61015/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-32063-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-32063-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 61106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 60930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	8015NM Prep	
MB 880-60930/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-60930/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-60930/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-5137-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-5137-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 60956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	8015B NM	60930
MB 880-60930/1-A	Method Blank	Total/NA	Solid	8015B NM	60930
LCS 880-60930/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	60930
LCSD 880-60930/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	60930
890-5137-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	60930
890-5137-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	60930

Analysis Batch: 61128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

HPLC/IC

Leach Batch: 60457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Soluble	Solid	DI Leach	
MB 880-60457/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-60457/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-60457/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-5099-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-5099-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 60463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-5100-1	SS08	Soluble	Solid	300.0	60457
MB 880-60457/1-A	Method Blank	Soluble	Solid	300.0	60457
LCS 880-60457/2-A	Lab Control Sample	Soluble	Solid	300.0	60457
LCSD 880-60457/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	60457
890-5099-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	60457
890-5099-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	60457

Lab Chronicle

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Client Sample ID: SS08

Date Collected: 08/15/23 13:00
Date Received: 08/15/23 15:02

Lab Sample ID: 890-5100-1

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			5.00 g	5 mL	61015	08/24/23 13:35	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	60963	08/25/23 09:36	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			61106	08/25/23 09:38	SM	EET MID
Total/NA	Analysis	8015 NM		1			61128	08/25/23 11:26	SM	EET MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	60930	08/23/23 16:00	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	60956	08/24/23 19:04	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	60457	08/17/23 11:22	SMC	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	60463	08/17/23 18:32	SMC	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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 Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

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 Bg Sinks 3-25-31 Battery

Job ID: 890-5100-1
SDG: 03C1558231

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-5100-1	SS08	Solid	08/15/23 13:00	08/15/23 15:02	1

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Ben Belill	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, LLC	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Greene St
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	989-854-0852	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	Plu Big Sinks 3-25 31 Battery	Turn Around	
Project Number:	03C1558231	☒ Routine ☐ Rush	
Project Location:	32.164408, -103.77774	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:	T_NM007
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	Parameters: Chlorides	TPH	BTEX
SS08	S	8/15/23	13:00	1'	G	1		X	X	X

890-5100 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 #:
nAB1731042349
Cost center:
1081021001
API: 30-015-42111
AFE:
EW.2018.062460.EXP.01
Ben Belill:
bbelill@ensolum.com

MD

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			8-15-23 15:02			
3				4		
5				6		

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-5100-1
SDG Number: 03C1558231

Login Number: 5100
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: 890-5100-1
SDG Number: 03C1558231

Login Number: 5100
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 08/17/23 10:52 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	

ENSOLUM

APPENDIX C

NMOCD Notifications

Tacoma Morrissey

From: Collins, Melanie <melanie.collins@exxonmobil.com>
Sent: Friday, April 14, 2023 1:06 PM
To: Ashley Ager; Tacoma Morrissey
Cc: Green, Garrett J
Subject: FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 199381

[**EXTERNAL EMAIL**]

Denial 10/28/17 PLU BS 3-25-31 report due 6/30/23

From: Green, Garrett J <garrett.green@exxonmobil.com>
Sent: Tuesday, April 11, 2023 10:18 AM
To: Collins, Melanie <melanie.collins@exxonmobil.com>
Subject: FW: The Oil Conservation Division (OCD) has rejected the application, Application ID: 199381

From: OCDOnline@state.nm.us <OCDOnline@state.nm.us>
Sent: Friday, March 24, 2023 7:41 AM
To: Green, Garrett J <garrett.green@exxonmobil.com>
Subject: The Oil Conservation Division (OCD) has rejected the application, Application ID: 199381

External Email - Think Before You Click

To whom it may concern (c/o Garrett Green for BOPCO, L.P.),

The OCD has rejected the submitted *Internal Manual Incident File Supporting Documentation (ENV)* (IM-BNF), for incident ID (n#) nAB1731042349,
for the following reasons:

- **The depth to groundwater has not been adequately determined. 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 in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table 1 of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.**
- **Submit a report via the OCD permitting portal by 6/30/2023.**

The rejected IM-BNF can be found in the OCD Online: Permitting - Action Status, under the Application ID: 199381.
Please review and make the required correction(s) prior to resubmitting.
If you have any questions why this application was rejected or believe it was rejected in error, please contact me prior to submitting an additional IM-BNF.

Thank you,
Ashley Maxwell

From: Collins, Melanie
To: ocd.enviro@state.nm.us; Hamlet, Robert, EMNRD (Robert.Hamlet@emnrd.nm.gov); Harimon, Jocelyn, EMNRD (Jocelyn.Harimon@emnrd.nm.gov)
Cc: Green, Garrett J; DelawareSpills /SM; Ben Belill
Subject: XTO - Sampling Notification (Week of 8/14/23 - 8/18/23)
Date: Thursday, August 10, 2023 9:28:49 AM
Attachments: image001.png

[**EXTERNAL EMAIL**]

All,

XTO plans to complete final sampling activities at the sites listed below for the week of August 14, 2023.

Monday

- PLU BS 3-25-31 / nAB1731042349
- Nash 36 / nAPP2224236187

Tuesday

- Nash 36 / nAPP2224236187

Thank you,

Melanie Collins

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

ENSOLUM

APPENDIX D

October 23, 2018 Closure Request

LT Environmental, Inc.
3300 North "A" Street, Building 1, Unit 103
Midland, Texas 79705
432.704.5178

October 23, 2018

Mr. Mike Bratcher
New Mexico Oil Conservation District
811 South First Street
Artesia, New Mexico 88210

RE: Closure Request
PLU Big Sinks 3-25-31 Battery
Remediation Permit Number 2RP-4470
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following letter report detailing excavation of impacted soil and confirmation soil sampling activities at the PLU Big Sinks 3-25-31 battery (Site) located in Unit A, Section 4, Township 25 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation activities was to address impact to soil after a release of approximately 51 barrels (bbls) of oil and 6 bbls of produced water from a failed fire tube gasket on the heater treater. The release was discovered on October 28, 2017. Approximately 36 bbls of oil and 4 bbls of produced water were recovered using a vacuum truck. The release affected approximately 2,300 square feet of the caliche well pad, approximately 2,300 square feet of an adjacent pasture, and misted approximately 7,000 square feet of a pasture west of the Site. Micro-Blaze® was applied to the offsite vegetation. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on November 3, 2017, and was assigned Remediation Permit (RP) Number 2RP-4470 (Attachment 1). Based on the results of the confirmation sampling event conducted after impacted soil was removed, XTO is requesting no further action for this release.

BACKGROUND

Because the release and remediation work were conducted prior to August 14, 2018, LTE applied the NMOCD 1993 *Guidelines for Leaks, Spills, and Releases* for determining remediation action levels. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data and known aquifer properties. The nearest permitted water well with depth to groundwater data is C 03891, located approximately 2.9 miles east of the release, with a depth to groundwater of 429 feet bgs and a total depth of 635 feet bgs. The Site is greater than 1,000 feet from a water source and greater than 1,000 feet from a private domestic water source. The closest surface water to the Site is a freshwater emergent wetland, located approximately 8,131 feet southeast of the Site. Based on these criteria, the

NMOCD site ranking for remediation action levels is 0, and the following remediation action levels applied under the NMOCD 1993 *Guidelines for Leaks, Spills, and Releases*: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region, LTE applied a site-specific chloride action level of 600 mg/kg.

EXCAVATION ACTIVITIES AND SOIL SAMPLING

On July 24 to July 27, 2018, LTE personnel were on site to oversee the excavation of impacted soil. LTE scientists directed excavation activities based on field screening results to delineate petroleum hydrocarbon and chloride impacts to soil. Soil samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993, and Hach® chloride QuanTab® test strips. There was one area excavated by hydro-vacuum around the equipment in the containment area and one excavation in the pasture area west of the pad where heavy equipment was utilized. The pasture excavation measured approximately 3,600 square feet in area with the depth ranging from approximately 1 foot to 4 feet bgs throughout the excavation. The well pad excavation measured approximately 450 square feet in area with the depth ranging from approximately 0.5 foot to 1.5 feet bgs throughout the excavation. The horizontal extent of the excavations are illustrated on Figure 2.

LTE collected 22 confirmation soil samples (SS01 through SS13, FS01, FS02, FS04, and SW01 through SW06) from the excavations and surrounding pasture area on July 24 to July 26, 2018, and on October 9, 2018. Soil samples SS01 through SS03 were collected in the pasture outside of the excavation to confirm there were no remaining impacts to the areas where Micro-Blaze® was applied. Soil samples SW01 through SW06, FS01, FS02, and FS04 were collected from the sidewalls and the floor of the pasture excavation. Soil samples SS04, SS05, and SS09 were collected from the hydro-vacuum excavated area on the well pad. Soil samples SS06 through SS08 and SS10 were collected on the well pad outside of the excavation extent to confirm lateral delineation. The soil samples were collected and placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH- oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.

Laboratory analytical results indicated that BTEX and total TPH concentrations were compliant with the NMOCD site-specific remediation action levels in all soil samples, except soil sample SS07. Soil sample SS07 results indicated chloride concentrations of 1,100 mg/kg exceeded the remediation action level of 600 mg/kg. On October 9, 2018, LTE returned to delineate the impacts around soil sample SS07 by collecting confirmation soil samples SS11 through SS13. The soil

samples were collected and handled as previously described and submitted to Xenco in Midland, Texas.

Approximately 363 cubic yards of impacted soil were removed using a dump truck and hydro-vacuum. Impacted soil was transported and properly disposed of at the Lea Land Landfill Halfway Facility, in Hobbs, New Mexico. Photographs of the open excavation are included as Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results indicated that all final confirmation soil samples were compliant with the NMOCD site-specific remediation action levels for BTEX, TPH, and chloride, except for soil sample SS07, which exceeded the NMOCD remediation action level for chloride. XTO's safety policy restricts soil disturbing activities to a 3-foot radius of process equipment. This safety policy is established to protect workers and to reduce the likelihood of compromising the integrity of the equipment. This policy was enforced along the eastern edge of the excavation where impacted soil was identified within three feet of a meter and the heater treater. The excavation was advanced to three feet from the equipment by hydro-vacuum and hand digging methods to remove as much impacted soil as possible around soil sample SS07. Laboratory analytical results for delineation soil samples SS11 through SS13 indicated that chloride concentrations were compliant with the remediation action level. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 3.

CONCLUSIONS

The impacted soil was excavated from the release areas and laboratory analytical results for the confirmation soil samples collected from the final excavation extents indicate that BTEX, TPH, and chloride concentrations are compliant with NMOCD site-specific remediation action levels, with the exception of soil sample SS07. Impacted soil was left in-place within three feet of process equipment per XTO's safety policy described above. XTO has successfully removed 363 cubic yards of impacted soil at the Site, leaving an estimated 6 cubic yards of soil near the heater treater containing 1,100 mg/kg of chloride in place. Due to the site ranking criteria of 0 for this Site, indicating potential receptors are significantly distant of any remaining impact, XTO requests no further action for release number 2RP-4470. Migration of the remaining chloride is unlikely to migrate vertically to groundwater upon backfilling excavations with caliche. Additionally, per the New Mexico Administrative Code rule 19.15.29.12 amended August 2018, soil sample SS07 would be compliant with the NMOCD Table 1 concentration for chloride.

Upon approval of the no further action request, XTO will backfill the excavations with material purchased locally and recontour the Site to match pre-existing site conditions. XTO will re-seed the pasture area with Bureau of Land Management seed mix #2 via drill or broadcast method. An

updated NMOCD Form C-141 is included as Attachment 1. If you have any questions or comments, please do not hesitate to contact Ms. Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Maria Pruett, NMOCD
Shelly Tucker, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-4470)
Attachment 2	Photographic Log
Attachment 3	Laboratory Analytical Reports

FIGURES

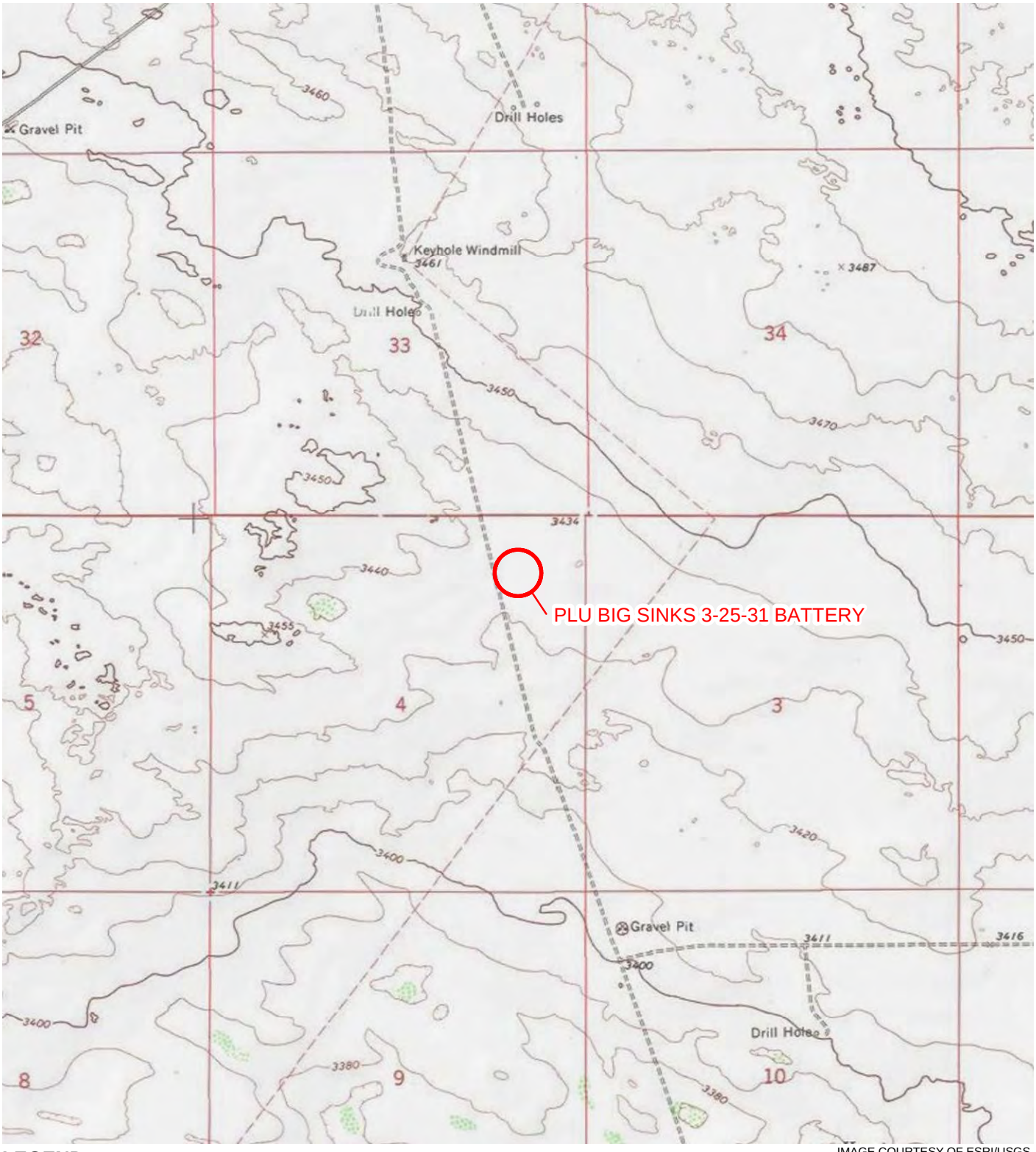

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-4470

FIGURE 1
SITE LOCATION MAP
PLU BIG SINKS 3-25-31 BATTERY
UNIT A SEC 4 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917044_PLU BIG SINKS 3-25-31 TB\012917044_FIG01_SL_2018_4470.mxd

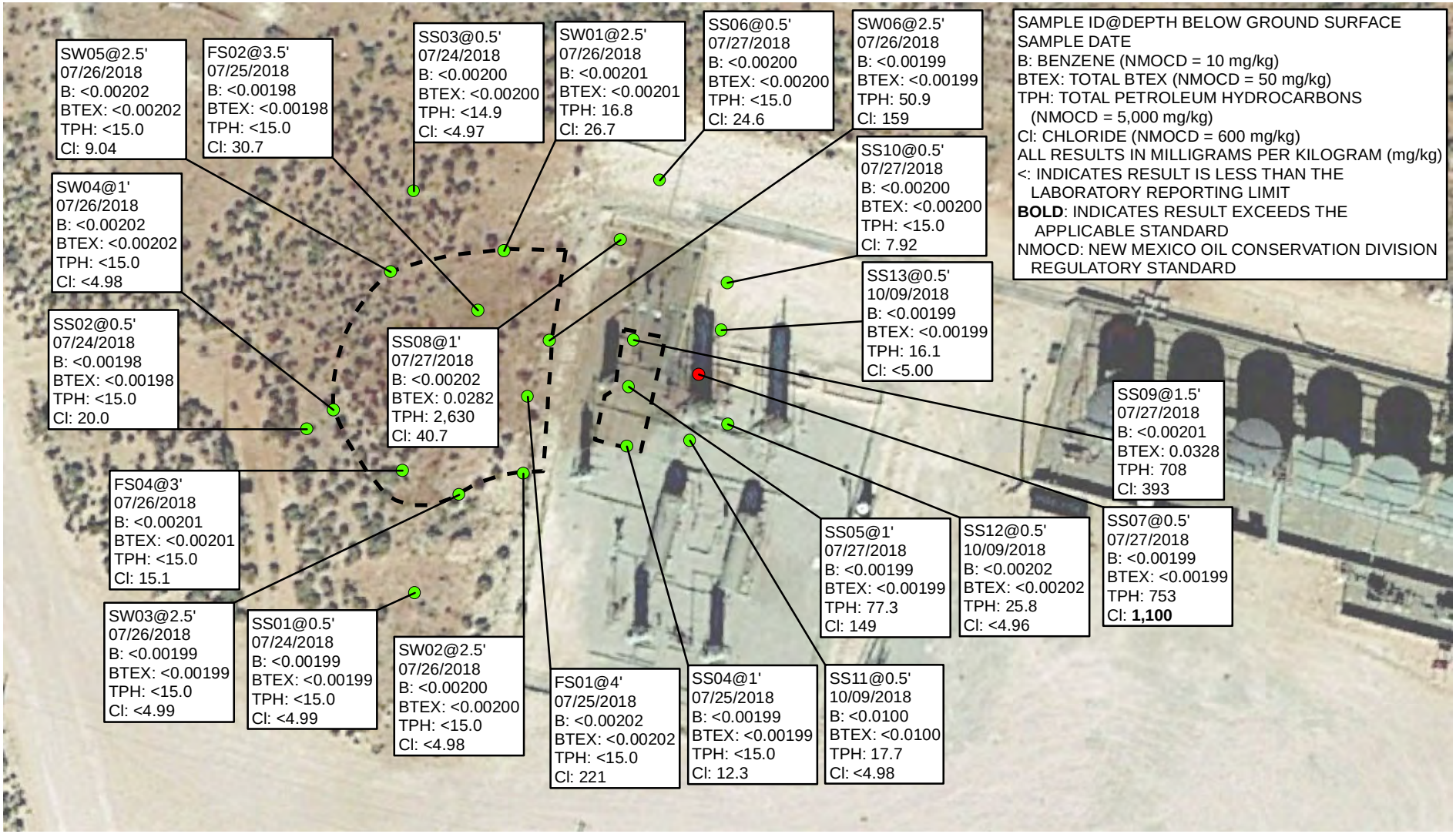

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE
- EXCAVATION EXTENT

0 40 80

Feet

N

NOTE: REMEDIATION PERMIT NUMBER 2RP-4470

FIGURE 2
SOIL SAMPLE LOCATIONS
PLU BIG SINKS 3-25-31 BATTERY
UNIT A SEC 4 T25S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917044_PLU BIG SINKS 3-25-31 TB\012917044_FIG02_SITE_2018_4470_091218.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PLU BIG SINKS 3-25-31 BATTERY
REMEDIATION PERMIT NUMBER 2RP-4470
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	07/24/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SS02	0.5	07/24/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	20.0
SS03	0.5	07/24/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97
FS01	4	07/25/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	221
FS02	3.5	07/25/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	30.7
SS04	1	07/25/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	12.3
FS04	3	07/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	15.1
SW01	2.5	07/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	16.8	<15.0	16.8	16.8	26.7
SW02	2.5	07/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW03	2.5	07/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
SW04	1	07/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98
SW05	2.5	07/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	9.04
SW06	2.5	07/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	50.9	<14.9	50.9	50.9	159
SS05	1	07/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	77.3	<14.9	77.3	77.3	149
SS06	0.5	07/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.6
SS07	0.5	07/27/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	753	<15.0	753	753	**1,100**
SS08	1	07/27/2018	<0.00202	<0.00202	0.00398	0.0242	0.0282	73.8	2,510	43.8	2,580	2,630	40.7
SS09	1.5	07/27/2018	<0.00201	<0.00201	0.00644	0.0264	0.0328	82.4	605	20.4	687	708	393
SS10	0.5	07/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.92
SS11	0.5	10/09/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	17.7	<15.0	<15.0	17.7	17.7	<4.98
SS12	0.5	10/09/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	25.8	<15.0	<15.0	25.8	25.8	<4.96
SS13	0.5	10/09/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	16.1	<5.00
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	NE	5,000	600

Notes:
bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
mg/kg - milligrams per kilogram
NE - not established
NMOCD - New Mexico Oil Conservation Division
DRO - diesel range organics
GRO - gasoline range organics
ORO - oil range organics
TPH - total petroleum hydrocarbons
< - indicates result is below laboratory reporting limits
Bold - indicates result exceeds the applicable regulatory standard.

ATTACHMENT 1: INITIAL/ FINAL NMOCD FORM C-141 (2RP-4470)

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 03 2017
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy (BOPCO # 260737)	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name: PLU Big Sinks 3-25-31 Battery (API for PLU CVX JV BS #027H)	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-42111

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	4	25S	31E	775	North	1070	East	Eddy

location of battery → Latitude 32.164680° Longitude -103.77774° ← place of release

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 51 BO, 6 BPW	Volume Recovered: 36 BO, 4 BPW
Source of Release: Heater Treater	Date and Hour of Occurrence: 10/28/2017 time unknown	Date and Hour of Discovery: 10/28/2017 9 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher and Crystal Weaver (NMOCD), Jim Amos and Shelly Tucker (BLM)	
By Whom? Amy Ruth	Date and Hour 10/29/2017 6:01 pm by email	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*
N/A

Please refer to the New Mexico Oil Conservation Division Website for updated form(s) at: http://www.emnrd.state.nm.us/OCD/forms.html Thank you

Describe Cause of Problem and Remedial Action Taken.*
The heater treater fire tube gasket failed. The vessel was isolated until the gasket can be replaced.

Describe Area Affected and Cleanup Action Taken.*
The leak affected approximately 2,300 square feet of caliche pad. The leak also impacted 2,300 square feet of pasture and misted 7K square feet of pasture west of the facility. Free standing fluids were recovered.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature:	OIL CONSERVATION DIVISION
Printed Name: Kyle Littrell	Approved by Environmental Specialist: Crystal Weaver
Title: Environmental Coordinator	Approval Date: 11/6/17 Expiration Date: N/A
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval: see attached Attached 3RP-4470
Date: 11/3/2017 Phone: 432-221-7331	

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **11/3/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4470 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 12/3/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Weaver, Crystal, EMNRD

From: Ruth, Amy <Amy_Ruth@xtoenergy.com>
Sent: Friday, November 3, 2017 2:45 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Shelly Tucker; Jim Amos
Cc: McSpadden, Wes; Sanders, Toady; Littrell, Kyle; Foust, Bryan
Subject: RE: Release Notification- PLU BS 3-25-31 CTB on 10/28/17
Attachments: Initial C-141 - PLU BS 3-25-31 CTB 10-28-17.pdf

Good Afternoon,

Please find attached the initial form C-141 regarding the referenced accidental release event. If you have any questions or concerns, feel free to call at any time. Thank you and have a good evening...

Respectfully,

Amy C. Ruth
Delaware Basin Division
Environmental Coordinator
3104 E. Greene Street | Carlsbad, NM 88220 | M: 432.661.0571 | O: 575.887.7329

From: Ruth, Amy
Sent: Sunday, October 29, 2017 6:01 PM
To: Mike Bratcher; Crystal EMNRD Weaver; Shelly Tucker; Jim Amos
Cc: McSpadden, Wes; Sanders, Toady; Littrell, Kyle; Foust, Bryan; Fuqua, Danny
Subject: Release Notification- PLU BS 3-25-31 CTB on 10/28/17

All,

This is sent as notification of an accidental release of fluids from PLU Big Sinks 3-25-31 CTB that occurred yesterday. Details will be sent with the submission of an initial C-141 form. Please call me with questions or concerns. Thank you.

Respectfully,

Amy Ruth
432-661-0571

Bratcher, Mike, EMNRD

From: Ruth, Amy <Amy_Ruth@xtoenergy.com>
Sent: Sunday, October 29, 2017 6:01 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Shelly Tucker; Jim Amos
Cc: McSpadden, Wes; Sanders, Toady; Littrell, Kyle; Foust, Bryan; Fuqua, Danny
Subject: Release Notification- PLU BS 3-25-31 CTB on 10/28/17

All,

This is sent as notification of an accidental release of fluids from PLU Big Sinks 3-25-31 CTB that occurred yesterday. Details will be sent with the submission of an initial C-141 form. Please call me with questions or concerns. Thank you.

Respectfully,

Amy Ruth
432-661-0571

Sent from my iPhone

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-4470
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: 432-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident # 2RP-4470
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.164680° Longitude -103.77774°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU Big Sinks 3-25-31 Battery (API for Poker Lake Unit CVX JV BS #027H)	Site Type: Exploration and Production
Date Release Discovered: 10/28/2017	API#: 30-015-42111

Unit Letter	Section	Township	Range	County
A	4	25S	31E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 51 bbls	Volume Recovered (bbls) 36 bbls
☒ Produced Water	Volume Released (bbls): 6 bbls	Volume Recovered (bbls): 4 bbl
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: The heater treater fire gasket failed.		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4470
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? Release > 25 barrels
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes. Notice was given by Amy Ruth to Mike Bratcher, Crystal Weaver, Shelly Tucker, and Jim Amos on October 29, 2017 at 6:01 pm via email.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/23/2018

email: kyle.littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4470
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

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

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/23/2018

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View southwest of pasture excavation.

Photograph 2: View south of equipment and well pad excavation.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 577917

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinles 3-25-31/ 2RP-4470

08-MAR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)

08-MAR-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **577917**
PLU Big Sinles 3-25-31/ 2RP-4470
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 577917. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 577917 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-28-18 09:10	12 In	577917-001
SS2	S	02-28-18 09:20	12 In	577917-002
SS3	S	02-28-18 09:30	12 In	577917-003
SS4	S	02-28-18 09:40	12 In	577917-004
SS5	S	02-28-18 09:50	12 In	577917-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinles 3-25-31/ 2RP-4470

Project ID:
Work Order Number(s): *577917*

Report Date: *08-MAR-18*
Date Received: *03/01/2018*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3042980 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3043008 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3043154 Inorganic Anions by EPA 300
Lab Sample ID 577917-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 577917-001, -002, -003, -004, -005. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 577917

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinles 3-25-31/ 2RP-4470

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Mar-01-18 01:10 pm

Report Date: 08-MAR-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	577917-001		577917-002		577917-003		577917-004		577917-005	
	Field Id:	SS1		SS2		SS3		SS4		SS5	
	Depth:	12- In		12- In		12- In		12- In		12- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-28-18 09:10		Feb-28-18 09:20		Feb-28-18 09:30		Feb-28-18 09:40		Feb-28-18 09:50	
BTEX by EPA 8021B	***Extracted:***	Mar-06-18 08:30		Mar-06-18 08:30		Mar-06-18 08:30		Mar-06-18 17:00		Mar-06-18 08:30	
	Analyzed:	Mar-07-18 14:37		Mar-07-18 14:37		Mar-07-18 14:37		Mar-07-18 13:41		Mar-07-18 14:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403	<0.00398	0.00398	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Mar-07-18 18:30		Mar-07-18 18:30		Mar-07-18 18:30		Mar-07-18 18:30		Mar-07-18 18:30	
	Analyzed:	Mar-08-18 12:18		Mar-08-18 12:39		Mar-08-18 13:32		Mar-08-18 12:44		Mar-08-18 12:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12.6	5.00	893	24.7	1230	5.00	27700	245	809	4.99
TPH by SW8015 Mod	***Extracted:***	Mar-07-18 10:00		Mar-07-18 10:00		Mar-07-18 10:00		Mar-07-18 10:00		Mar-07-18 10:00	
	Analyzed:	Mar-07-18 16:56		Mar-07-18 17:22		Mar-07-18 17:47		Mar-07-18 18:13		Mar-07-18 18:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	65.0	14.9	<15.0	15.0	241	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	20.0	14.9	<15.0	15.0	107	15.0	<15.0	15.0
Total TPH		<15.0	15.0	85.0	14.9	<15.0	15.0	348	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-001	Date Collected:	02.28.18 09.10	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.07.18 18.30	Basis:	Wet Weight
Seq Number:	3043154				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.6**	5.00	mg/kg	03.08.18 12.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.18 10.00	Basis:	Wet Weight
Seq Number:	3043121				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.18 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.07.18 16.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.07.18 16.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.07.18 16.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.07.18 16.56	
o-Terphenyl	84-15-1	102	%	70-135	03.07.18 16.56	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-001	Date Collected:	02.28.18 09.10	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.06.18 08.30	Basis:	Wet Weight
Seq Number:	3042980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.07.18 14.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.07.18 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	79	%	70-130	03.07.18 14.37	
4-Bromofluorobenzene	460-00-4	110	%	70-130	03.07.18 14.37	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-002	Date Collected:	02.28.18 09.20	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.07.18 18.30	Basis:	Wet Weight
Seq Number:	3043154				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**893**	24.7	mg/kg	03.08.18 12.39		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.18 10.00	Basis:	Wet Weight
Seq Number:	3043121				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.07.18 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**65.0**	14.9	mg/kg	03.07.18 17.22		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**20.0**	14.9	mg/kg	03.07.18 17.22		1
Total TPH	PHC635	**85.0**	14.9	mg/kg	03.07.18 17.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.07.18 17.22	
o-Terphenyl	84-15-1	106	%	70-135	03.07.18 17.22	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-002	Date Collected:	02.28.18 09.20	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.06.18 08.30	Basis:	Wet Weight
Seq Number:	3042980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.07.18 14.37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.07.18 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	72	%	70-130	03.07.18 14.37	
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.07.18 14.37	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-003	Date Collected:	02.28.18 09.30	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.07.18 18.30	Basis:	Wet Weight
Seq Number:	3043154				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1230**	5.00	mg/kg	03.08.18 13.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.18 10.00	Basis:	Wet Weight
Seq Number:	3043121				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.18 17.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.07.18 17.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.07.18 17.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.07.18 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.07.18 17.47	
o-Terphenyl	84-15-1	110	%	70-135	03.07.18 17.47	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-003	Date Collected:	02.28.18 09.30	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.06.18 08.30	Basis:	Wet Weight
Seq Number:	3042980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.07.18 14.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.07.18 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	71	%	70-130	03.07.18 14.37	
4-Bromofluorobenzene	460-00-4	121	%	70-130	03.07.18 14.37	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-004	Date Collected:	02.28.18 09.40	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.07.18 18.30	Basis:	Wet Weight
Seq Number:	3043154				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27700**	245	mg/kg	03.08.18 12.44		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.18 10.00	Basis:	Wet Weight
Seq Number:	3043121				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.18 18.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**241**	15.0	mg/kg	03.07.18 18.13		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**107**	15.0	mg/kg	03.07.18 18.13		1
Total TPH	PHC635	**348**	15.0	mg/kg	03.07.18 18.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.07.18 18.13	
o-Terphenyl	84-15-1	108	%	70-135	03.07.18 18.13	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-004	Date Collected:	02.28.18 09.40	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.06.18 17.00	Basis:	Wet Weight
Seq Number:	3043008				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.07.18 13.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.07.18 13.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.07.18 13.41	
1,4-Difluorobenzene	540-36-3	82	%	70-130	03.07.18 13.41	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-005	Date Collected:	02.28.18 09.50	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	03.07.18 18.30	Basis:	Wet Weight
Seq Number:	3043154				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**809**	4.99	mg/kg	03.08.18 12.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.07.18 10.00	Basis:	Wet Weight
Seq Number:	3043121				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.18 18.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.07.18 18.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.07.18 18.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.07.18 18.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.07.18 18.38	
o-Terphenyl	84-15-1	99	%	70-135	03.07.18 18.38	

Certificate of Analytical Results 577917

LT Environmental, Inc., Arvada, CO

PLU Big Sinles 3-25-31/ 2RP-4470

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	03.01.18 13.10
Lab Sample Id:	577917-005	Date Collected:	02.28.18 09.50	Sample Depth:	12 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	03.06.18 08.30	Basis:	Wet Weight
Seq Number:	3042980				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.07.18 14.37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.07.18 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.07.18 14.37	
1,4-Difluorobenzene	540-36-3	77	%	70-130	03.07.18 14.37	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 577917

LT Environmental, Inc.

PLU Big Sinles 3-25-31/ 2RP-4470

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3043154 — Matrix: Solid — Date Prep: 03.07.18
MB Sample Id: 7640435-1-BLK — LCS Sample Id: 7640435-1-BKS — LCSD Sample Id: 7640435-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	242	97	90-110	2	20	mg/kg	03.08.18 12:07	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3043154 — Matrix: Soil — Date Prep: 03.07.18
Parent Sample Id: 577917-001 — MS Sample Id: 577917-001 S — MSD Sample Id: 577917-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.6	250	285	109	286	109	90-110	0	20	mg/kg	03.08.18 12:23	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3043154 — Matrix: Soil — Date Prep: 03.07.18
Parent Sample Id: 577917-003 — MS Sample Id: 577917-003 S — MSD Sample Id: 577917-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	250	1420	76	1430	80	90-110	1	20	mg/kg	03.08.18 13:38	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3043121 — Matrix: Solid — Date Prep: 03.07.18
MB Sample Id: 7640357-1-BLK — LCS Sample Id: 7640357-1-BKS — LCSD Sample Id: 7640357-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1040	104	1010	101	70-135	3	35	mg/kg	03.07.18 14:33	
Diesel Range Organics (DRO)	<15.0	1000	1090	109	1030	103	70-135	6	35	mg/kg	03.07.18 14:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		115		114		70-135	%	03.07.18 14:33
o-Terphenyl	107		113		109		70-135	%	03.07.18 14:33

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 577917

LT Environmental, Inc.

PLU Big Sinles 3-25-31/ 2RP-4470

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3043121 | Matrix: Soil | Date Prep: 03.07.18
Parent Sample Id: 577916-005 | MS Sample Id: 577916-005 S | MSD Sample Id: 577916-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	1050	105	1050	105	70-135	0	35	mg/kg	03.07.18 15:52	
Diesel Range Organics (DRO)	103	999	1160	106	1170	107	70-135	1	35	mg/kg	03.07.18 15:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		120		70-135	%	03.07.18 15:52
o-Terphenyl	112		113		70-135	%	03.07.18 15:52

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3042980 | Matrix: Solid | Date Prep: 03.06.18
MB Sample Id: 7640283-1-BLK | LCS Sample Id: 7640283-1-BKS | LCSD Sample Id: 7640283-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.100	100	0.100	100	70-130	0	35	mg/kg	03.07.18 14:37	
Toluene	<0.00200	0.0998	0.0933	93	0.0938	94	70-130	1	35	mg/kg	03.07.18 14:37	
Ethylbenzene	<0.00200	0.0998	0.0970	97	0.0975	98	70-130	1	35	mg/kg	03.07.18 14:37	
m,p-Xylenes	<0.00399	0.200	0.190	95	0.191	96	70-130	1	35	mg/kg	03.07.18 14:37	
o-Xylene	<0.00200	0.0998	0.0957	96	0.0964	96	70-130	1	35	mg/kg	03.07.18 14:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		71		72		70-130	%	03.07.18 14:37
4-Bromofluorobenzene	109		125		125		70-130	%	03.07.18 14:37

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3043008 | Matrix: Solid | Date Prep: 03.06.18
MB Sample Id: 7640330-1-BLK | LCS Sample Id: 7640330-1-BKS | LCSD Sample Id: 7640330-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0741	74	0.0718	71	70-130	3	35	mg/kg	03.07.18 07:32	
Toluene	<0.00201	0.100	0.0793	79	0.0780	77	70-130	2	35	mg/kg	03.07.18 07:32	
Ethylbenzene	<0.00201	0.100	0.0901	90	0.0880	87	70-130	2	35	mg/kg	03.07.18 07:32	
m,p-Xylenes	<0.00402	0.201	0.178	89	0.175	87	70-130	2	35	mg/kg	03.07.18 07:32	
o-Xylene	<0.00201	0.100	0.0907	91	0.0893	88	70-130	2	35	mg/kg	03.07.18 07:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		84		82		70-130	%	03.07.18 07:32
4-Bromofluorobenzene	96		108		109		70-130	%	03.07.18 07:32

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 577917

LT Environmental, Inc.

PLU Big Sinles 3-25-31/ 2RP-4470

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3042980
Matrix: Soil
Date Prep: 03.06.18
Parent Sample Id: 577918-001
MS Sample Id: 577918-001 S
MSD Sample Id: 577918-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0592	59	0.0551	55	70-130	7	35	mg/kg	03.07.18 14:37	X
Toluene	<0.00202	0.101	0.0540	53	0.0428	43	70-130	23	35	mg/kg	03.07.18 14:37	X
Ethylbenzene	<0.00202	0.101	0.0499	49	0.0410	41	70-130	20	35	mg/kg	03.07.18 14:37	X
m,p-Xylenes	<0.00403	0.202	0.0960	48	0.0685	34	70-130	33	35	mg/kg	03.07.18 14:37	X
o-Xylene	<0.00202	0.101	0.0491	49	0.0425	43	70-130	14	35	mg/kg	03.07.18 14:37	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	71		91		70-130	%	03.07.18 14:37
4-Bromofluorobenzene	91		121		70-130	%	03.07.18 14:37

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3043008
Matrix: Soil
Date Prep: 03.06.18
Parent Sample Id: 578048-016
MS Sample Id: 578048-016 S
MSD Sample Id: 578048-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0734	73	0.0744	74	70-130	1	35	mg/kg	03.07.18 08:10	
Toluene	<0.00201	0.100	0.0776	78	0.0795	79	70-130	2	35	mg/kg	03.07.18 08:10	
Ethylbenzene	<0.00201	0.100	0.0891	89	0.0908	90	70-130	2	35	mg/kg	03.07.18 08:10	
m,p-Xylenes	<0.00402	0.201	0.177	88	0.181	90	70-130	2	35	mg/kg	03.07.18 08:10	
o-Xylene	<0.00201	0.100	0.0882	88	0.0899	89	70-130	2	35	mg/kg	03.07.18 08:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		86		70-130	%	03.07.18 08:10
4-Bromofluorobenzene	115		123		70-130	%	03.07.18 08:10

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

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Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge, LA (832) 712-8143
Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550
www.xenco.com

Xenco Quote #

Xenco Job # 577917

Client / Reporting Information

Company Name / Branch: LTE / permian
Company Address: 3300 N. A. Street + Bld 1 #103
Email: abarrera@lenv.com
Phone No:
Project Contact: Adnan Baker
Samplers's Name: AC

Project Information

Project Name/Number: PLU Big Snuts 3-25-31 / 2RP-4470
Project Location: NM
Invoice To: XTO energy - Kyle Littrell
PO Number: 30-015-26931

Analytical Information

BTEX 8021
TPH 8015
Chloride 300.1

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	TPH 8015	Chloride 300.1	Field Comments
1	SS1	1'	2/28	0910	S	1								1	X	X	X	
2	SS2			0920														
3	SS3			0930														
4	SS4			0940														
5	SS5			0950														
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY
- X Standard

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ Level II Report with TRRP checklist

Notes:

Temp: 3.4 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.2

FED-

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1	Date Time: 2/28 1530	Received By: 1	Relinquished By: 2	Date Time: 2/28 750	Received By: 2
Relinquished by: 3	Date Time: 3/1 1310	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/01/2018 01:10:00 PM

Work Order #: 577917

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**No**	TPH received in bulk jars
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 03/01/2018

Checklist reviewed by: Jessica Kramer Date: 03/01/2018

Jessica Kramer

Analytical Report 593924

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 3-25-31TB

03-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

03-AUG-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **593924**
PLU Big Sinks 3-25-31TB
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 593924. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 593924 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	07-24-18 11:30	6 In	593924-001
SS02	S	07-24-18 16:00	6 In	593924-002
SS03	S	07-24-18 16:15	6 In	593924-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 3-25-31TB

Project ID:
Work Order Number(s): *593924*

Report Date: *03-AUG-18*
Date Received: *07/28/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058496 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 593924-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 593924-001.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3058718 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 593924

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31TB

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Sat Jul-28-18 09:00 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	593924-001		593924-002		593924-003			
	Field Id:	SS01		SS02		SS03			
	Depth:	6- In		6- In		6- In			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-24-18 11:30		Jul-24-18 16:00		Jul-24-18 16:15			
BTEX by EPA 8021B	***Extracted:***	Aug-01-18 08:00		Aug-02-18 08:00		Aug-02-18 08:00			
	Analyzed:	Aug-01-18 10:54		Aug-02-18 13:11		Aug-02-18 12:50			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
Toluene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
Ethylbenzene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
m,p-Xylenes		<0.00398	0.00398	<0.00397	0.00397	<0.00401	0.00401		
o-Xylene		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
Total Xylenes		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
Total BTEX		<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200		
Inorganic Anions by EPA 300	***Extracted:***	Jul-31-18 11:30		Jul-31-18 11:30		Jul-31-18 11:30			
	Analyzed:	Jul-31-18 19:30		Jul-31-18 19:36		Jul-31-18 19:43			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		<4.99	4.99	20.0	4.90	<4.97	4.97		
TPH by SW8015 Mod	***Extracted:***	Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00			
	Analyzed:	Jul-30-18 18:21		Jul-30-18 19:21		Jul-30-18 19:41			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9		
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<14.9	14.9		
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9		

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-001	Date Collected:	07.24.18 11.30	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 11.30	Basis:	Wet Weight
Seq Number:	3058577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	07.31.18 19.30	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 18.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 18.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 18.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 18.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	07.30.18 18.21	
o-Terphenyl	84-15-1	81	%	70-135	07.30.18 18.21	

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-001	Date Collected:	07.24.18 11.30	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.01.18 08.00	Basis:	Wet Weight
Seq Number:	3058496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.18 10.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.18 10.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.18 10.54	
4-Bromofluorobenzene	460-00-4	87	%	70-130	08.01.18 10.54	

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-002	Date Collected:	07.24.18 16.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 11.30	Basis:	Wet Weight
Seq Number:	3058577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.0**	4.90	mg/kg	07.31.18 19.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 19.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 19.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 19.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 19.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	07.30.18 19.21	
o-Terphenyl	84-15-1	86	%	70-135	07.30.18 19.21	

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-002	Date Collected:	07.24.18 16.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.02.18 13.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.02.18 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.02.18 13.11	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.02.18 13.11	

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-003	Date Collected:	07.24.18 16.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 11.30	Basis:	Wet Weight
Seq Number:	3058577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	07.31.18 19.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.30.18 19.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.30.18 19.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.30.18 19.41	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.30.18 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	07.30.18 19.41	
o-Terphenyl	84-15-1	84	%	70-135	07.30.18 19.41	

Certificate of Analytical Results 593924

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593924-003	Date Collected:	07.24.18 16.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.02.18 12.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.02.18 12.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.02.18 12.50	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.02.18 12.50	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 593924

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Solid — Date Prep: 07.31.18
MB Sample Id: 7659420-1-BLK — LCS Sample Id: 7659420-1-BKS — LCSD Sample Id: 7659420-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	250	100	90-110	0	20	mg/kg	07.31.18 16:29	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Soil — Date Prep: 07.31.18
Parent Sample Id: 593692-028 — MS Sample Id: 593692-028 S — MSD Sample Id: 593692-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	215	259	490	106	481	103	90-110	2	20	mg/kg	07.31.18 16:48	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Soil — Date Prep: 07.31.18
Parent Sample Id: 593692-035 — MS Sample Id: 593692-035 S — MSD Sample Id: 593692-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.4	260	300	106	300	106	90-110	0	20	mg/kg	07.31.18 18:30	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058330 — Matrix: Solid — Date Prep: 07.30.18
MB Sample Id: 7659409-1-BLK — LCS Sample Id: 7659409-1-BKS — LCSD Sample Id: 7659409-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	918	92	934	93	70-135	2	20	mg/kg	07.30.18 17:40	
Diesel Range Organics (DRO)	<15.0	1000	955	96	959	96	70-135	0	20	mg/kg	07.30.18 17:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		124		124		70-135	%	07.30.18 17:40
o-Terphenyl	94		100		100		70-135	%	07.30.18 17:40

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 593924

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3058330 | Matrix: Soil | Date Prep: 07.30.18
Parent Sample Id: 593924-001 | MS Sample Id: 593924-001 S | MSD Sample Id: 593924-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	880	88	902	90	70-135	2	20	mg/kg	07.30.18 18:41	
Diesel Range Organics (DRO)	<15.0	997	953	96	979	98	70-135	3	20	mg/kg	07.30.18 18:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	07.30.18 18:41
o-Terphenyl	94		92		70-135	%	07.30.18 18:41

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058496 | Matrix: Solid | Date Prep: 08.01.18
MB Sample Id: 7659535-1-BLK | LCS Sample Id: 7659535-1-BKS | LCSD Sample Id: 7659535-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0887	88	0.0867	87	70-130	2	35	mg/kg	08.01.18 08:50	
Toluene	<0.00202	0.101	0.0930	92	0.0920	92	70-130	1	35	mg/kg	08.01.18 08:50	
Ethylbenzene	<0.00202	0.101	0.108	107	0.106	106	70-130	2	35	mg/kg	08.01.18 08:50	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.209	105	70-130	1	35	mg/kg	08.01.18 08:50	
o-Xylene	<0.00202	0.101	0.104	103	0.104	104	70-130	0	35	mg/kg	08.01.18 08:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		117		112		70-130	%	08.01.18 08:50
4-Bromofluorobenzene	82		84		89		70-130	%	08.01.18 08:50

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058718 | Matrix: Solid | Date Prep: 08.02.18
MB Sample Id: 7659651-1-BLK | LCS Sample Id: 7659651-1-BKS | LCSD Sample Id: 7659651-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.107	106	0.106	105	70-130	1	35	mg/kg	08.02.18 10:06	
Toluene	<0.00202	0.101	0.106	105	0.105	104	70-130	1	35	mg/kg	08.02.18 10:06	
Ethylbenzene	<0.00202	0.101	0.114	113	0.112	111	70-130	2	35	mg/kg	08.02.18 10:06	
m,p-Xylenes	<0.00403	0.202	0.231	114	0.227	112	70-130	2	35	mg/kg	08.02.18 10:06	
o-Xylene	<0.00202	0.101	0.108	107	0.107	106	70-130	1	35	mg/kg	08.02.18 10:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		118		115		70-130	%	08.02.18 10:06
4-Bromofluorobenzene	94		101		104		70-130	%	08.02.18 10:06

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

QC Summary 593924

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058496 — Matrix: Soil — Date Prep: 08.01.18
Parent Sample Id: 593924-001 — MS Sample Id: 593924-001 S — MSD Sample Id: 593924-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0710	71	0.0665	67	70-130	7	35	mg/kg	08.01.18 09:31	X
Toluene	<0.00201	0.100	0.0726	73	0.0635	64	70-130	13	35	mg/kg	08.01.18 09:31	X
Ethylbenzene	<0.00201	0.100	0.0788	79	0.0641	64	70-130	21	35	mg/kg	08.01.18 09:31	X
m,p-Xylenes	<0.00402	0.201	0.154	77	0.122	61	70-130	23	35	mg/kg	08.01.18 09:31	X
o-Xylene	<0.00201	0.100	0.0777	78	0.0622	62	70-130	22	35	mg/kg	08.01.18 09:31	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		114		70-130	%	08.01.18 09:31
4-Bromofluorobenzene	90		94		70-130	%	08.01.18 09:31

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058718 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 593926-005 — MS Sample Id: 593926-005 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0586	58	70-130	mg/kg	08.02.18 10:47	X
Toluene	<0.00201	0.101	0.0565	56	70-130	mg/kg	08.02.18 10:47	X
Ethylbenzene	<0.00201	0.101	0.0568	56	70-130	mg/kg	08.02.18 10:47	X
m,p-Xylenes	<0.00402	0.201	0.114	57	70-130	mg/kg	08.02.18 10:47	X
o-Xylene	<0.00201	0.101	0.0534	53	70-130	mg/kg	08.02.18 10:47	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		70-130	%	08.02.18 10:47
4-Bromofluorobenzene	104		70-130	%	08.02.18 10:47

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 593924

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705
Email: Abaker@ltenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Ben Belin

Project Information

Project Name/Number: PLU BigSinks 3-25-31 TB
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-4470

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8020	TPH EPA 8015	Chlorides 300.1	Field Comments
1	SS01	6"	7/24/18	1130	S	1								X	X	X	X	
2	SS02	6"	↓	1600	↓	↓								X	X	X	X	
3	SS03	6"	↓	1615	↓	↓								X	X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking # 772041220426

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Ben Belin	7/24@1730	Chris Pierce		7/27 15:30	
2						Daniel 7/28/18
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						0900
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 0.3 NB Thermo. Corr. Factor 0.0

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/28/2018 09:00:00 AM

Work Order #: 593924

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 07/30/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 07/30/2018
Jessica Kramer

Analytical Report 593925

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 3-25-31TB

03-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

03-AUG-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **593925**
PLU Big Sinks 3-25-31TB
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 593925. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 593925 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07-25-18 15:50	4 ft	593925-001
FS02	S	07-25-18 17:00	3.5 ft	593925-002
SS04	S	07-25-18 15:20	1 ft	593925-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 3-25-31TB

Project ID:
Work Order Number(s): *593925*

Report Date: *03-AUG-18*
Date Received: *07/28/2018*

Sample receipt non conformances and comments:

per client email request, sample depth on FS02 changed to 3.5' and FS03 sample name changed to SS04. JKR 08/03/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058718 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3058721 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 593925

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31TB

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Sat Jul-28-18 09:00 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	593925-001		593925-002		593925-003					
	Field Id:	FS01		FS02		SS04					
	Depth:	4- ft		3.5- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jul-25-18 15:50		Jul-25-18 17:00		Jul-25-18 15:20					
BTEX by EPA 8021B	***Extracted:***	Aug-02-18 08:00		Aug-02-18 08:00		Aug-02-18 14:00					
	Analyzed:	Aug-02-18 13:52		Aug-02-18 13:32		Aug-03-18 05:39					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				
m,p-Xylenes		<0.00403	0.00403	<0.00396	0.00396	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00198	0.00198	<0.00199	0.00199				

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 593925

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31TB

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Sat Jul-28-18 09:00 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	593925-001		593925-002		593925-003			
	Field Id:	FS01		FS02		SS04			
	Depth:	4- ft		3.5- ft		1- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-25-18 15:50		Jul-25-18 17:00		Jul-25-18 15:20			
Inorganic Anions by EPA 300	***Extracted:***	Jul-31-18 11:30		Jul-31-18 16:30		Jul-31-18 16:30			
	Analyzed:	Jul-31-18 19:50		Aug-01-18 02:50		Aug-01-18 02:57			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		221	4.95	30.7	4.97	12.3	4.99		
TPH by SW8015 Mod	***Extracted:***	Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00			
	Analyzed:	Jul-30-18 20:01		Jul-30-18 20:21		Jul-30-18 20:41			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0		

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-001	Date Collected:	07.25.18 15.50	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 11.30	Basis:	Wet Weight
Seq Number:	3058577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**221**	4.95	mg/kg	07.31.18 19.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 20.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 20.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 20.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 20.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.30.18 20.01	
o-Terphenyl	84-15-1	94	%	70-135	07.30.18 20.01	

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-001	Date Collected:	07.25.18 15.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.02.18 13.52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.02.18 13.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.02.18 13.52	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.02.18 13.52	

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-002	Date Collected:	07.25.18 17.00	Sample Depth:	3.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 16.30	Basis:	Wet Weight
Seq Number:	3058518				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.7**	4.97	mg/kg	08.01.18 02.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 20.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 20.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 20.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 20.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.30.18 20.21	
o-Terphenyl	84-15-1	94	%	70-135	07.30.18 20.21	

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-002	Date Collected:	07.25.18 17.00	Sample Depth:	3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.02.18 13.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.02.18 13.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.02.18 13.32	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.02.18 13.32	

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-003	Date Collected:	07.25.18 15.20	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 16.30	Basis:	Wet Weight
Seq Number:	3058518				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.3**	4.99	mg/kg	08.01.18 02.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 20.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 20.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 20.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 20.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.30.18 20.41	
o-Terphenyl	84-15-1	97	%	70-135	07.30.18 20.41	

Certificate of Analytical Results 593925

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593925-003	Date Collected:	07.25.18 15.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 14.00	Basis:	Wet Weight
Seq Number:	3058721				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.03.18 05.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.03.18 05.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.03.18 05.39	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.03.18 05.39	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 593925

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Solid — Date Prep: 07.31.18
MB Sample Id: 7659420-1-BLK — LCS Sample Id: 7659420-1-BKS — LCSD Sample Id: 7659420-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	250	100	90-110	0	20	mg/kg	07.31.18 16:29	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058518 — Matrix: Solid — Date Prep: 07.31.18
MB Sample Id: 7659551-1-BLK — LCS Sample Id: 7659551-1-BKS — LCSD Sample Id: 7659551-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	254	102	252	101	90-110	1	20	mg/kg	07.31.18 23:57	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Soil — Date Prep: 07.31.18
Parent Sample Id: 593692-028 — MS Sample Id: 593692-028 S — MSD Sample Id: 593692-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	215	259	490	106	481	103	90-110	2	20	mg/kg	07.31.18 16:48	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058577 — Matrix: Soil — Date Prep: 07.31.18
Parent Sample Id: 593692-035 — MS Sample Id: 593692-035 S — MSD Sample Id: 593692-035 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.4	260	300	106	300	106	90-110	0	20	mg/kg	07.31.18 18:30	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058518 — Matrix: Soil — Date Prep: 07.31.18
Parent Sample Id: 594074-002 — MS Sample Id: 594074-002 S — MSD Sample Id: 594074-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<7.32	366	381	104	380	104	90-110	0	20	mg/kg	08.01.18 01:50	

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 593925

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058518 Matrix: Soil Date Prep: 07.31.18
Parent Sample Id: 594127-001 MS Sample Id: 594127-001 S MSD Sample Id: 594127-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.28	251	269	104	272	105	90-110	1	20	mg/kg	08.01.18 00:17	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058330 Matrix: Solid Date Prep: 07.30.18
MB Sample Id: 7659409-1-BLK LCS Sample Id: 7659409-1-BKS LCSD Sample Id: 7659409-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	918	92	934	93	70-135	2	20	mg/kg	07.30.18 17:40	
Diesel Range Organics (DRO)	<15.0	1000	955	96	959	96	70-135	0	20	mg/kg	07.30.18 17:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		124		124		70-135	%	07.30.18 17:40
o-Terphenyl	94		100		100		70-135	%	07.30.18 17:40

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058330 Matrix: Soil Date Prep: 07.30.18
Parent Sample Id: 593924-001 MS Sample Id: 593924-001 S MSD Sample Id: 593924-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	880	88	902	90	70-135	2	20	mg/kg	07.30.18 18:41	
Diesel Range Organics (DRO)	<15.0	997	953	96	979	98	70-135	3	20	mg/kg	07.30.18 18:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	07.30.18 18:41
o-Terphenyl	94		92		70-135	%	07.30.18 18:41

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 593925

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058718 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659651-1-BLK — LCS Sample Id: 7659651-1-BKS — LCSD Sample Id: 7659651-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.107	106	0.106	105	70-130	1	35	mg/kg	08.02.18 10:06	
Toluene	<0.00202	0.101	0.106	105	0.105	104	70-130	1	35	mg/kg	08.02.18 10:06	
Ethylbenzene	<0.00202	0.101	0.114	113	0.112	111	70-130	2	35	mg/kg	08.02.18 10:06	
m,p-Xylenes	<0.00403	0.202	0.231	114	0.227	112	70-130	2	35	mg/kg	08.02.18 10:06	
o-Xylene	<0.00202	0.101	0.108	107	0.107	106	70-130	1	35	mg/kg	08.02.18 10:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		118		115		70-130	%	08.02.18 10:06
4-Bromofluorobenzene	94		101		104		70-130	%	08.02.18 10:06

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058721 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659654-1-BLK — LCS Sample Id: 7659654-1-BKS — LCSD Sample Id: 7659654-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.107	107	0.0979	97	70-130	9	35	mg/kg	08.02.18 21:41	
Toluene	<0.00201	0.100	0.102	102	0.0937	93	70-130	8	35	mg/kg	08.02.18 21:41	
Ethylbenzene	<0.00201	0.100	0.109	109	0.0989	98	70-130	10	35	mg/kg	08.02.18 21:41	
m,p-Xylenes	<0.00402	0.201	0.225	112	0.204	101	70-130	10	35	mg/kg	08.02.18 21:41	
o-Xylene	<0.00201	0.100	0.108	108	0.0980	97	70-130	10	35	mg/kg	08.02.18 21:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		126		114		70-130	%	08.02.18 21:41
4-Bromofluorobenzene	90		98		95		70-130	%	08.02.18 21:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058721 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 594409-001 — MS Sample Id: 594409-001 S — MSD Sample Id: 594409-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0800	79	0.0883	88	70-130	10	35	mg/kg	08.02.18 22:22	
Toluene	<0.00202	0.101	0.0757	75	0.0801	80	70-130	6	35	mg/kg	08.02.18 22:22	
Ethylbenzene	<0.00202	0.101	0.0685	68	0.0704	70	70-130	3	35	mg/kg	08.02.18 22:22	X
m,p-Xylenes	<0.00403	0.202	0.136	67	0.140	70	70-130	3	35	mg/kg	08.02.18 22:22	X
o-Xylene	<0.00202	0.101	0.0667	66	0.0667	67	70-130	0	35	mg/kg	08.02.18 22:22	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	122		125		70-130	%	08.02.18 22:22
4-Bromofluorobenzene	108		99		70-130	%	08.02.18 22:22

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 593925

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3058718 Matrix: Soil Date Prep: 08.02.18

Parent Sample Id: 593926-005 MS Sample Id: 593926-005 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0586	58	70-130	mg/kg	08.02.18 10:47	X
Toluene	<0.00201	0.101	0.0565	56	70-130	mg/kg	08.02.18 10:47	X
Ethylbenzene	<0.00201	0.101	0.0568	56	70-130	mg/kg	08.02.18 10:47	X
m,p-Xylenes	<0.00402	0.201	0.114	57	70-130	mg/kg	08.02.18 10:47	X
o-Xylene	<0.00201	0.101	0.0534	53	70-130	mg/kg	08.02.18 10:47	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		70-130	%	08.02.18 10:47
4-Bromofluorobenzene	104		70-130	%	08.02.18 10:47

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

XENCO LABORATORIES

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Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 593925

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office

Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705

Email: Abaker@ltenv.com

Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU Big Sinks 3-25-31 TB

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP-4470

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 8020	TPH EPA 8015	Chloride 300.1	Field Comments
1	FS01	4'	7/26/18	1550	S	1								X	X	X	X	
2	FS02	3.5'		1700										X	X	X	X	
3	FS03	1'		1520										X	X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking # 772841724424

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Ben Belill	7/26 17:26	Chris Pullen			
2					7/27 15:30	
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						Y 0.3 NO 0.0

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/28/2018 09:00:00 AM

Work Order #: 593925

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 07/30/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 07/30/2018

Jessica Kramer

Analytical Report 593926

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 3-25-31TB

03-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

03-AUG-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **593926**
PLU Big Sinks 3-25-31TB
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 593926. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 593926 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	07-26-18 11:00	2.5 ft	593926-001
SW02	S	07-26-18 11:30	2.5 ft	593926-002
SW03	S	07-26-18 13:00	2.5 ft	593926-003
FS04	S	07-26-18 14:30	3 ft	593926-004
SW04	S	07-26-18 14:15	1 ft	593926-005
SW05	S	07-26-18 13:00	2.5 ft	593926-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 3-25-31TB

Project ID:
Work Order Number(s): *593926*

Report Date: *03-AUG-18*
Date Received: *07/28/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058496 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3058718 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 593926-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike.
Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 593926-001, -005.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 593926

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31TB

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Sat Jul-28-18 09:00 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	593926-001		593926-002		593926-003		593926-004		593926-005		593926-006	
	Field Id:	SW01		SW02		SW03		FS04		SW04		SW05	
	Depth:	2.5- ft		2.5- ft		2.5- ft		3- ft		1- ft		2.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-26-18 11:00		Jul-26-18 11:30		Jul-26-18 13:00		Jul-26-18 14:30		Jul-26-18 14:15		Jul-26-18 13:00	
BTEX by EPA 8021B	*Extracted:*	Aug-02-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00		Aug-01-18 08:00		Aug-02-18 08:00		Aug-01-18 08:00	
	Analyzed:	Aug-02-18 12:29		Aug-01-18 13:39		Aug-01-18 15:48		Aug-01-18 16:09		Aug-02-18 12:09		Aug-01-18 16:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402	<0.00404	0.00404	<0.00403	0.00403
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202
Inorganic Anions by EPA 300	*Extracted:*	Jul-31-18 16:30		Aug-01-18 09:30		Aug-01-18 09:30		Aug-01-18 09:30		Aug-01-18 09:30		Aug-01-18 09:30	
	Analyzed:	Aug-01-18 03:04		Aug-01-18 12:22		Aug-01-18 12:42		Aug-01-18 12:48		Aug-01-18 12:55		Aug-01-18 13:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26.7	4.97	<4.98	4.98	<4.99	4.99	15.1	4.98	<4.98	4.98	9.04	4.97
TPH by SW8015 Mod	*Extracted:*	Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00		Jul-30-18 16:00	
	Analyzed:	Jul-31-18 07:17		Jul-30-18 22:00		Jul-30-18 22:21		Jul-30-18 22:40		Jul-30-18 23:00		Jul-30-18 23:20	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		16.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		16.8	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-001	Date Collected:	07.26.18 11.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.31.18 16.30	Basis:	Wet Weight
Seq Number:	3058518				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.7**	4.97	mg/kg	08.01.18 03.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.31.18 07.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.8**	15.0	mg/kg	07.31.18 07.17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.31.18 07.17	U	1
Total TPH	PHC635	**16.8**	15.0	mg/kg	07.31.18 07.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.31.18 07.17	
o-Terphenyl	84-15-1	97	%	70-135	07.31.18 07.17	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-001	Date Collected:	07.26.18 11.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.02.18 12.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.02.18 12.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.02.18 12.29	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.02.18 12.29	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-002	Date Collected:	07.26.18 11.30	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.01.18 09.30	Basis:	Wet Weight
Seq Number:	3058584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.01.18 12.22	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 22.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 22.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 22.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 22.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.30.18 22.00	
o-Terphenyl	84-15-1	99	%	70-135	07.30.18 22.00	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-002	Date Collected:	07.26.18 11.30	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.01.18 08.00	Basis:	Wet Weight
Seq Number:	3058496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.01.18 13.39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.01.18 13.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.01.18 13.39	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.01.18 13.39	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-003	Date Collected:	07.26.18 13.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.01.18 09.30	Basis:	Wet Weight
Seq Number:	3058584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.01.18 12.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 22.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 22.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.30.18 22.21	
o-Terphenyl	84-15-1	94	%	70-135	07.30.18 22.21	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-003	Date Collected:	07.26.18 13.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.01.18 08.00	Basis:	Wet Weight
Seq Number:	3058496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.01.18 15.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.01.18 15.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	08.01.18 15.48	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.01.18 15.48	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-004	Date Collected:	07.26.18 14.30	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.01.18 09.30	Basis:	Wet Weight
Seq Number:	3058584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.1**	4.98	mg/kg	08.01.18 12.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 22.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 22.40	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 22.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 22.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.30.18 22.40	
o-Terphenyl	84-15-1	93	%	70-135	07.30.18 22.40	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-004	Date Collected:	07.26.18 14.30	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.01.18 08.00	Basis:	Wet Weight
Seq Number:	3058496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.01.18 16.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.01.18 16.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.01.18 16.09	
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.01.18 16.09	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-005	Date Collected:	07.26.18 14.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.01.18 09.30	Basis:	Wet Weight
Seq Number:	3058584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.01.18 12.55	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 23.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 23.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 23.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 23.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.30.18 23.00	
o-Terphenyl	84-15-1	87	%	70-135	07.30.18 23.00	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-005	Date Collected:	07.26.18 14.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.02.18 08.00	Basis:	Wet Weight
Seq Number:	3058718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.02.18 12.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.02.18 12.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.02.18 12.09	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.02.18 12.09	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-006	Date Collected:	07.26.18 13.00	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.01.18 09.30	Basis:	Wet Weight
Seq Number:	3058584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.04**	4.97	mg/kg	08.01.18 13.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.30.18 16.00	Basis:	Wet Weight
Seq Number:	3058330				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.30.18 23.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.30.18 23.20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.30.18 23.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.30.18 23.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.30.18 23.20	
o-Terphenyl	84-15-1	97	%	70-135	07.30.18 23.20	

Certificate of Analytical Results 593926

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31TB

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.28.18 09.00
Lab Sample Id:	593926-006	Date Collected:	07.26.18 13.00	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.01.18 08.00	Basis:	Wet Weight
Seq Number:	3058496				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.01.18 16.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.01.18 16.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.01.18 16.30	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.01.18 16.30	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 593926

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058518 Matrix: Solid Date Prep: 07.31.18
MB Sample Id: 7659551-1-BLK LCS Sample Id: 7659551-1-BKS LCSD Sample Id: 7659551-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	254	102	252	101	90-110	1	20	mg/kg	07.31.18 23:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058584 Matrix: Solid Date Prep: 08.01.18
MB Sample Id: 7659574-1-BLK LCS Sample Id: 7659574-1-BKS LCSD Sample Id: 7659574-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	248	99	90-110	0	20	mg/kg	08.01.18 12:08	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058518 Matrix: Soil Date Prep: 07.31.18
Parent Sample Id: 594074-002 MS Sample Id: 594074-002 S MSD Sample Id: 594074-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<7.32	366	381	104	380	104	90-110	0	20	mg/kg	08.01.18 01:50	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058518 Matrix: Soil Date Prep: 07.31.18
Parent Sample Id: 594127-001 MS Sample Id: 594127-001 S MSD Sample Id: 594127-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.28	251	269	104	272	105	90-110	1	20	mg/kg	08.01.18 00:17	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058584 Matrix: Soil Date Prep: 08.01.18
Parent Sample Id: 593926-002 MS Sample Id: 593926-002 S MSD Sample Id: 593926-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	248	100	248	100	90-110	0	20	mg/kg	08.01.18 12:28	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 593926

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058584 Matrix: Soil Date Prep: 08.01.18
Parent Sample Id: 593927-007 MS Sample Id: 593927-007 S MSD Sample Id: 593927-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	500	248	729	92	728	92	90-110	0	20	mg/kg	08.01.18 14:02	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058330 Matrix: Solid Date Prep: 07.30.18
MB Sample Id: 7659409-1-BLK LCS Sample Id: 7659409-1-BKS LCSD Sample Id: 7659409-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	918	92	934	93	70-135	2	20	mg/kg	07.30.18 17:40	
Diesel Range Organics (DRO)	<15.0	1000	955	96	959	96	70-135	0	20	mg/kg	07.30.18 17:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		124		124		70-135	%	07.30.18 17:40
o-Terphenyl	94		100		100		70-135	%	07.30.18 17:40

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3058330 Matrix: Soil Date Prep: 07.30.18
Parent Sample Id: 593924-001 MS Sample Id: 593924-001 S MSD Sample Id: 593924-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	880	88	902	90	70-135	2	20	mg/kg	07.30.18 18:41	
Diesel Range Organics (DRO)	<15.0	997	953	96	979	98	70-135	3	20	mg/kg	07.30.18 18:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		125		70-135	%	07.30.18 18:41
o-Terphenyl	94		92		70-135	%	07.30.18 18:41

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 593926

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058496 — Matrix: Solid — Date Prep: 08.01.18
MB Sample Id: 7659535-1-BLK — LCS Sample Id: 7659535-1-BKS — LCSD Sample Id: 7659535-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0887	88	0.0867	87	70-130	2	35	mg/kg	08.01.18 08:50	
Toluene	<0.00202	0.101	0.0930	92	0.0920	92	70-130	1	35	mg/kg	08.01.18 08:50	
Ethylbenzene	<0.00202	0.101	0.108	107	0.106	106	70-130	2	35	mg/kg	08.01.18 08:50	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.209	105	70-130	1	35	mg/kg	08.01.18 08:50	
o-Xylene	<0.00202	0.101	0.104	103	0.104	104	70-130	0	35	mg/kg	08.01.18 08:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		117		112		70-130	%	08.01.18 08:50
4-Bromofluorobenzene	82		84		89		70-130	%	08.01.18 08:50

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058718 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659651-1-BLK — LCS Sample Id: 7659651-1-BKS — LCSD Sample Id: 7659651-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.107	106	0.106	105	70-130	1	35	mg/kg	08.02.18 10:06	
Toluene	<0.00202	0.101	0.106	105	0.105	104	70-130	1	35	mg/kg	08.02.18 10:06	
Ethylbenzene	<0.00202	0.101	0.114	113	0.112	111	70-130	2	35	mg/kg	08.02.18 10:06	
m,p-Xylenes	<0.00403	0.202	0.231	114	0.227	112	70-130	2	35	mg/kg	08.02.18 10:06	
o-Xylene	<0.00202	0.101	0.108	107	0.107	106	70-130	1	35	mg/kg	08.02.18 10:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		118		115		70-130	%	08.02.18 10:06
4-Bromofluorobenzene	94		101		104		70-130	%	08.02.18 10:06

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058496 — Matrix: Soil — Date Prep: 08.01.18
Parent Sample Id: 593924-001 — MS Sample Id: 593924-001 S — MSD Sample Id: 593924-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0710	71	0.0665	67	70-130	7	35	mg/kg	08.01.18 09:31	X
Toluene	<0.00201	0.100	0.0726	73	0.0635	64	70-130	13	35	mg/kg	08.01.18 09:31	X
Ethylbenzene	<0.00201	0.100	0.0788	79	0.0641	64	70-130	21	35	mg/kg	08.01.18 09:31	X
m,p-Xylenes	<0.00402	0.201	0.154	77	0.122	61	70-130	23	35	mg/kg	08.01.18 09:31	X
o-Xylene	<0.00201	0.100	0.0777	78	0.0622	62	70-130	22	35	mg/kg	08.01.18 09:31	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		114		70-130	%	08.01.18 09:31
4-Bromofluorobenzene	90		94		70-130	%	08.01.18 09:31

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 593926

LT Environmental, Inc.

PLU Big Sinks 3-25-31TB

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3058718 Matrix: Soil Date Prep: 08.02.18

Parent Sample Id: 593926-005 MS Sample Id: 593926-005 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0586	58	70-130	mg/kg	08.02.18 10:47	X
Toluene	<0.00201	0.101	0.0565	56	70-130	mg/kg	08.02.18 10:47	X
Ethylbenzene	<0.00201	0.101	0.0568	56	70-130	mg/kg	08.02.18 10:47	X
m,p-Xylenes	<0.00402	0.201	0.114	57	70-130	mg/kg	08.02.18 10:47	X
o-Xylene	<0.00201	0.101	0.0534	53	70-130	mg/kg	08.02.18 10:47	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		70-130	%	08.02.18 10:47
4-Bromofluorobenzene	104		70-130	%	08.02.18 10:47

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

XENCO LABORATORIES

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San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote #

Xenco Job # 593926

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office

Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705

Email: Abaker@ltenv.com

Phone No: (432) 704-5178

Project Contact: Adrian Baker

Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU Big Sinks 3-25-31 TB

Project Location: Carlsbad, NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: 2RP - 4470

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021	TPH EPA 8015	Chlorides 300.1	Field Comments
1	SW01	2.5'	7/26/18	1100	S	1								X	X	X	X	
2	SW02	2.5'		1130										X	X	X	X	
3	SW03	2.5'		1300										X	X	X	X	
4	FS04	3'		1430										X	X	X	X	
5	SW04	1'		1415										X	X	X	X	
6	SW05	2.5		1300										X	X	X	X	
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [x] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking # 779417244426

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Ben T. Belill	7/26 17:28				
2					7/27 15:30	
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						☑ 0.3 NS 0.0

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/28/2018 09:00:00 AM

Work Order #: 593926

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 07/30/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 07/30/2018
Jessica Kramer

Analytical Report 594382

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 2-25-3-31 TB

06-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

06-AUG-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **594382**
PLU Big Sinks 2-25-3-31 TB
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 594382. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 594382 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS05	S	07-27-18 10:45	1 ft	594382-001
SS06	S	07-27-18 12:00	6 In	594382-002
SS07	S	07-27-18 13:15	6 In	594382-003
SS10	S	07-27-18 16:20	6 In	594382-004
SW06	S	07-26-18 13:10	2.5 ft	594382-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 2-25-3-31 TB

Project ID:
Work Order Number(s): *594382*

Report Date: *06-AUG-18*
Date Received: *08/01/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058909 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594382

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 2-25-3-31 TB

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Wed Aug-01-18 01:15 pm

Report Date: 06-AUG-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	594382-001		594382-002		594382-003		594382-004		594382-005	
	Field Id:	SS05		SS06		SS07		SS10		SW06	
	Depth:	1- ft		6- In		6- In		6- In		2.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-27-18 10:45		Jul-27-18 12:00		Jul-27-18 13:15		Jul-27-18 16:20		Jul-26-18 13:10	
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 17:00		Aug-03-18 17:00		Aug-03-18 17:00		Aug-03-18 17:00		Aug-03-18 17:00	
	Analyzed:	Aug-04-18 08:54		Aug-04-18 09:15		Aug-04-18 05:06		Aug-04-18 04:46		Aug-04-18 05:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00398	0.00398	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30		Aug-03-18 09:30	
	Analyzed:	Aug-03-18 13:43		Aug-03-18 14:03		Aug-03-18 14:09		Aug-03-18 14:16		Aug-03-18 14:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		149	5.01	24.6	4.98	1100	25.0	7.92	4.98	159	5.00
TPH by SW8015 Mod	***Extracted:***	Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00		Aug-02-18 17:00	
	Analyzed:	Aug-03-18 07:06		Aug-03-18 07:26		Aug-03-18 07:46		Aug-03-18 08:44		Aug-03-18 09:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		77.3	14.9	<15.0	15.0	753	15.0	<15.0	15.0	50.9	14.9
Oil Range Hydrocarbons (ORO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		77.3	14.9	<15.0	15.0	753	15.0	<15.0	15.0	50.9	14.9

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-001	Date Collected:	07.27.18 10.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**149**	5.01	mg/kg	08.03.18 13.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.03.18 07.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**77.3**	14.9	mg/kg	08.03.18 07.06		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.03.18 07.06	U	1
Total TPH	PHC635	**77.3**	14.9	mg/kg	08.03.18 07.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.03.18 07.06	
o-Terphenyl	84-15-1	93	%	70-135	08.03.18 07.06	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-001	Date Collected:	07.27.18 10.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.18 08.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.18 08.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.04.18 08.54	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.04.18 08.54	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-002	Date Collected:	07.27.18 12.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.6**	4.98	mg/kg	08.03.18 14.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 07.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 07.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 07.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.03.18 07.26	
o-Terphenyl	84-15-1	83	%	70-135	08.03.18 07.26	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-002	Date Collected:	07.27.18 12.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.04.18 09.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 09.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.04.18 09.15	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.04.18 09.15	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-003	Date Collected:	07.27.18 13.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1100**	25.0	mg/kg	08.03.18 14.09		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 07.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**753**	15.0	mg/kg	08.03.18 07.46		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 07.46	U	1
Total TPH	PHC635	**753**	15.0	mg/kg	08.03.18 07.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.03.18 07.46	
o-Terphenyl	84-15-1	118	%	70-135	08.03.18 07.46	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-003	Date Collected:	07.27.18 13.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.18 05.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.18 05.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.04.18 05.06	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.04.18 05.06	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-004	Date Collected:	07.27.18 16.20	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.92**	4.98	mg/kg	08.03.18 14.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.03.18 08.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.03.18 08.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.03.18 08.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.03.18 08.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.03.18 08.44	
o-Terphenyl	84-15-1	90	%	70-135	08.03.18 08.44	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SS10**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-004	Date Collected:	07.27.18 16.20	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.04.18 04.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.04.18 04.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.04.18 04.46	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.04.18 04.46	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-005	Date Collected:	07.26.18 13.10	Sample Depth:	2.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 09.30	Basis:	Wet Weight
Seq Number:	3058908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**159**	5.00	mg/kg	08.03.18 14.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.02.18 17.00	Basis:	Wet Weight
Seq Number:	3058802				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.03.18 09.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**50.9**	14.9	mg/kg	08.03.18 09.05		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.03.18 09.05	U	1
Total TPH	PHC635	**50.9**	14.9	mg/kg	08.03.18 09.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.03.18 09.05	
o-Terphenyl	84-15-1	88	%	70-135	08.03.18 09.05	

Certificate of Analytical Results 594382

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 2-25-3-31 TB

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594382-005	Date Collected:	07.26.18 13.10	Sample Depth:	2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.04.18 05.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.04.18 05.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.04.18 05.28	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.04.18 05.28	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 594382

LT Environmental, Inc.

PLU Big Sinks 2-25-3-31 TB

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659700-1-BLK — LCS Sample Id: 7659700-1-BKS — LCSD Sample Id: 7659700-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	260	104	259	104	90-110	0	20	mg/kg	08.03.18 10:07	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594371-001 — MS Sample Id: 594371-001 S — MSD Sample Id: 594371-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	864	249	1070	83	1080	87	90-110	1	20	mg/kg	08.03.18 11:29	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058908 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594381-003 — MS Sample Id: 594381-003 S — MSD Sample Id: 594381-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	205	251	466	104	463	103	90-110	1	20	mg/kg	08.03.18 13:02	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058802 — Matrix: Solid — Date Prep: 08.02.18
MB Sample Id: 7659680-1-BLK — LCS Sample Id: 7659680-1-BKS — LCSD Sample Id: 7659680-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	6.36	1000	975	98	996	100	70-135	2	20	mg/kg	08.03.18 03:27	
Diesel Range Organics (DRO)	3.61	1000	982	98	1010	101	70-135	3	20	mg/kg	08.03.18 03:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		120		124		70-135	%	08.03.18 03:27
o-Terphenyl	98		103		102		70-135	%	08.03.18 03:27

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Final 1.000

QC Summary 594382

LT Environmental, Inc.

PLU Big Sinks 2-25-3-31 TB

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058802 — Matrix: Soil — Date Prep: 08.02.18
Parent Sample Id: 594381-001 — MS Sample Id: 594381-001 S — MSD Sample Id: 594381-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	15.8	999	857	84	839	83	70-135	2	20	mg/kg	08.03.18 04:26	
Diesel Range Organics (DRO)	4.94	999	885	88	879	88	70-135	1	20	mg/kg	08.03.18 04:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	08.03.18 04:26
o-Terphenyl	91		94		70-135	%	08.03.18 04:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058909 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659751-1-BLK — LCS Sample Id: 7659751-1-BKS — LCSD Sample Id: 7659751-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.102	102	70-130	0	35	mg/kg	08.04.18 02:40	
Toluene	<0.00200	0.0998	0.101	101	0.101	101	70-130	0	35	mg/kg	08.04.18 02:40	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.106	106	70-130	1	35	mg/kg	08.04.18 02:40	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.214	107	70-130	2	35	mg/kg	08.04.18 02:40	
o-Xylene	<0.00200	0.0998	0.101	101	0.102	102	70-130	1	35	mg/kg	08.04.18 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		123		109		70-130	%	08.04.18 02:40
4-Bromofluorobenzene	91		104		102		70-130	%	08.04.18 02:40

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3058909 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594382-004 — MS Sample Id: 594382-004 S — MSD Sample Id: 594382-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0910	91	0.0863	85	70-130	5	35	mg/kg	08.04.18 03:22	
Toluene	0.000369	0.100	0.0895	89	0.0850	84	70-130	5	35	mg/kg	08.04.18 03:22	
Ethylbenzene	<0.00200	0.100	0.0936	94	0.0894	89	70-130	5	35	mg/kg	08.04.18 03:22	
m,p-Xylenes	<0.00401	0.200	0.187	94	0.179	89	70-130	4	35	mg/kg	08.04.18 03:22	
o-Xylene	<0.00200	0.100	0.0892	89	0.0858	85	70-130	4	35	mg/kg	08.04.18 03:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	128		127		70-130	%	08.04.18 03:22
4-Bromofluorobenzene	103		102		70-130	%	08.04.18 03:22

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

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CHAIN OF CUSTODY

Xenco Quote #:
Xenco Job #: 594382

Client / Reporting Information

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Phone No: (432) 704-5178
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Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU Big Sinks 3-25-31 TB
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-4470

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 8020	TPH EPA 8015	Chloride 300.1	Field Comments
1	SS05	1'	7/27/18	1045	S	1								X	X	X	X	
2	SS06	6"	↓	1200	↓	↓								X	X	X	X	
3	SS07	6"	↓	1315	↓	↓								X	X	X	X	
4	SS10	6"	↓	1620	↓	↓								X	X	X	X	
5	SW06	2.5'	7/26/18	1310	↓	↓								X	X	X	X	
6																		
7		7/27/18			BB													
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [x] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking # 776865107855

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1 Relinquished by Sampler: BJ Belill	7/30/18 17:25	1 Cammie Williams	2 Chris Dulce	7/31/18 15:30	2 [signature] 8/1/18 1130
3 Relinquished by:	Date Time:	3 Received By:	4 Relinquished By:	Date Time:	4 Received By:
5 Relinquished by:	Date Time:	5 Received By:	Custody Seal #	Preserved where applicable	On Ice: Y; Cooler Temp: 3.2; Thermo. Corr. Factor: R8 0.0

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/01/2018 01:15:00 PM

Work Order #: 594382

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08/02/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/02/2018
Jessica Kramer

Analytical Report 594383

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 3-25-31 TB

06-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

06-AUG-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **594383**
PLU Big Sinks 3-25-31 TB
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 594383. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 594383 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 594383

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31 TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS08	S	07-27-18 16:00	1 ft	594383-001
SS09	S	07-27-18 16:10	1.5 ft	594383-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 3-25-31 TB

Project ID:
Work Order Number(s): *594383*

Report Date: *06-AUG-18*
Date Received: *08/01/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058909 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 594383

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31 TB

Project Id:

Contact: Adrian Baker

Project Location: Carlsbad, NM

Date Received in Lab: Wed Aug-01-18 01:15 pm

Report Date: 06-AUG-18

Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	594383-001		594383-002					
	Field Id:	SS08		SS09					
	Depth:	1- ft		1.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-27-18 16:00		Jul-27-18 16:10					
BTEX by EPA 8021B	***Extracted:***	Aug-03-18 17:00		Aug-03-18 17:00					
	Analyzed:	Aug-04-18 05:48		Aug-04-18 06:09					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00201	0.00201				
Toluene		<0.00202	0.00202	<0.00201	0.00201				
Ethylbenzene		0.00398	0.00202	0.00644	0.00201				
m,p-Xylenes		0.0216	0.00403	0.0101	0.00402				
o-Xylene		0.00257	0.00202	0.0163	0.00201				
Total Xylenes		0.0242	0.00202	0.0264	0.00201				
Total BTEX		0.0282	0.00202	0.0328	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Aug-03-18 11:15		Aug-03-18 11:15					
	Analyzed:	Aug-03-18 15:23		Aug-03-18 15:29					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		40.7	5.02	393	4.96				
TPH by SW8015 Mod	***Extracted:***	Aug-04-18 09:00		Aug-04-18 09:00					
	Analyzed:	Aug-04-18 19:58		Aug-04-18 20:17					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		73.8	15.0	82.4	15.0				
Diesel Range Organics (DRO)		2510	15.0	605	15.0				
Oil Range Hydrocarbons (ORO)		43.8	15.0	20.4	15.0				
Total TPH		2630	15.0	708	15.0				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 594383

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31 TB

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594383-001	Date Collected:	07.27.18 16.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 11.15	Basis:	Wet Weight
Seq Number:	3058919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.7**	5.02	mg/kg	08.03.18 15.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.04.18 09.00	Basis:	Wet Weight
Seq Number:	3058982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**73.8**	15.0	mg/kg	08.04.18 19.58		1
Diesel Range Organics (DRO)	C10C28DRO	**2510**	15.0	mg/kg	08.04.18 19.58		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**43.8**	15.0	mg/kg	08.04.18 19.58		1
Total TPH	PHC635	**2630**	15.0	mg/kg	08.04.18 19.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.04.18 19.58	
o-Terphenyl	84-15-1	128	%	70-135	08.04.18 19.58	

Certificate of Analytical Results 594383

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31 TB

Sample Id:	**SS08**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594383-001	Date Collected:	07.27.18 16.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.04.18 05.48	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.04.18 05.48	U	1
Ethylbenzene	100-41-4	**0.00398**	0.00202	mg/kg	08.04.18 05.48		1
m,p-Xylenes	179601-23-1	**0.0216**	0.00403	mg/kg	08.04.18 05.48		1
o-Xylene	95-47-6	**0.00257**	0.00202	mg/kg	08.04.18 05.48		1
Total Xylenes	1330-20-7	**0.0242**	0.00202	mg/kg	08.04.18 05.48		1
Total BTEX		**0.0282**	0.00202	mg/kg	08.04.18 05.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.04.18 05.48	
4-Bromofluorobenzene	460-00-4	129	%	70-130	08.04.18 05.48	

Certificate of Analytical Results 594383

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31 TB

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594383-002	Date Collected:	07.27.18 16.10	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	08.03.18 11.15	Basis:	Wet Weight
Seq Number:	3058919				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**393**	4.96	mg/kg	08.03.18 15.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	08.04.18 09.00	Basis:	Wet Weight
Seq Number:	3058982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**82.4**	15.0	mg/kg	08.04.18 20.17		1
Diesel Range Organics (DRO)	C10C28DRO	**605**	15.0	mg/kg	08.04.18 20.17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**20.4**	15.0	mg/kg	08.04.18 20.17		1
Total TPH	PHC635	**708**	15.0	mg/kg	08.04.18 20.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.04.18 20.17	
o-Terphenyl	84-15-1	76	%	70-135	08.04.18 20.17	

Certificate of Analytical Results 594383

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31 TB

Sample Id:	**SS09**	Matrix:	Soil	Date Received:	08.01.18 13.15
Lab Sample Id:	594383-002	Date Collected:	07.27.18 16.10	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.03.18 17.00	Basis:	Wet Weight
Seq Number:	3058909				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.04.18 06.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.04.18 06.09	U	1
Ethylbenzene	100-41-4	**0.00644**	0.00201	mg/kg	08.04.18 06.09		1
m,p-Xylenes	179601-23-1	**0.0101**	0.00402	mg/kg	08.04.18 06.09		1
o-Xylene	95-47-6	**0.0163**	0.00201	mg/kg	08.04.18 06.09		1
Total Xylenes	1330-20-7	**0.0264**	0.00201	mg/kg	08.04.18 06.09		1
Total BTEX		**0.0328**	0.00201	mg/kg	08.04.18 06.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	08.04.18 06.09	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.04.18 06.09	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 594383

LT Environmental, Inc.

PLU Big Sinks 3-25-31 TB

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Solid — Date Prep: 08.03.18
MB Sample Id: 7659702-1-BLK — LCS Sample Id: 7659702-1-BKS — LCSD Sample Id: 7659702-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	268	107	264	106	90-110	2	20	mg/kg	08.03.18 14:49	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594384-002 — MS Sample Id: 594384-002 S — MSD Sample Id: 594384-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	729	250	957	91	988	104	90-110	3	20	mg/kg	08.03.18 15:09	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3058919 — Matrix: Soil — Date Prep: 08.03.18
Parent Sample Id: 594393-005 — MS Sample Id: 594393-005 S — MSD Sample Id: 594393-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	973	250	1220	99	1210	95	90-110	1	20	mg/kg	08.03.18 16:43	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3058982 — Matrix: Solid — Date Prep: 08.04.18
MB Sample Id: 7659797-1-BLK — LCS Sample Id: 7659797-1-BKS — LCSD Sample Id: 7659797-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	4.91	1000	965	97	901	90	70-135	7	20	mg/kg	08.04.18 12:04	
Diesel Range Organics (DRO)	2.55	1000	1010	101	937	94	70-135	7	20	mg/kg	08.04.18 12:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		124		125		70-135	%	08.04.18 12:04
o-Terphenyl	101		110		108		70-135	%	08.04.18 12:04

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Final 1.000

QC Summary 594383

LT Environmental, Inc.

PLU Big Sinks 3-25-31 TB

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3058982 | Matrix: Soil | Date Prep: 08.04.18
Parent Sample Id: 594450-009 | MS Sample Id: 594450-009 S | MSD Sample Id: 594450-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	15.7	998	882	87	881	87	70-135	0	20	mg/kg	08.04.18 13:03	
Diesel Range Organics (DRO)	3.05	998	938	94	984	98	70-135	5	20	mg/kg	08.04.18 13:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		70-135	%	08.04.18 13:03
o-Terphenyl	91		101		70-135	%	08.04.18 13:03

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058909 | Matrix: Solid | Date Prep: 08.03.18
MB Sample Id: 7659751-1-BLK | LCS Sample Id: 7659751-1-BKS | LCSD Sample Id: 7659751-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.102	102	0.102	102	70-130	0	35	mg/kg	08.04.18 02:40	
Toluene	<0.00200	0.0998	0.101	101	0.101	101	70-130	0	35	mg/kg	08.04.18 02:40	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.106	106	70-130	1	35	mg/kg	08.04.18 02:40	
m,p-Xylenes	<0.00399	0.200	0.210	105	0.214	107	70-130	2	35	mg/kg	08.04.18 02:40	
o-Xylene	<0.00200	0.0998	0.101	101	0.102	102	70-130	1	35	mg/kg	08.04.18 02:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		123		109		70-130	%	08.04.18 02:40
4-Bromofluorobenzene	91		104		102		70-130	%	08.04.18 02:40

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058909 | Matrix: Soil | Date Prep: 08.03.18
Parent Sample Id: 594382-004 | MS Sample Id: 594382-004 S | MSD Sample Id: 594382-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0910	91	0.0863	85	70-130	5	35	mg/kg	08.04.18 03:22	
Toluene	0.000369	0.100	0.0895	89	0.0850	84	70-130	5	35	mg/kg	08.04.18 03:22	
Ethylbenzene	<0.00200	0.100	0.0936	94	0.0894	89	70-130	5	35	mg/kg	08.04.18 03:22	
m,p-Xylenes	<0.00401	0.200	0.187	94	0.179	89	70-130	4	35	mg/kg	08.04.18 03:22	
o-Xylene	<0.00200	0.100	0.0892	89	0.0858	85	70-130	4	35	mg/kg	08.04.18 03:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	128		127		70-130	%	08.04.18 03:22
4-Bromofluorobenzene	103		102		70-130	%	08.04.18 03:22

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

XENCO LABORATORIES

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Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 594388

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705
Email: Abaker@ltenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Ben Belill

Project Information

Project Name/Number: PLU Big Sinks 3-25-31 TB
Project Location: Carlsbad, NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-4470

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 8020	TPH EPA 8015	Chloride 300.1
1	SS08	1'	7/27/18	1600	S	1								X	X	X	X
2	SS09	1.5'	7/27/18	1610	S	1								X	X	X	X
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

7/27/18 BB

Matrix Codes: W = Water; S = Soil/Sed/Solid; GW = Ground Water; DW = Drinking Water; P = Product; SW = Surface water; SL = Sludge; OW = Ocean/Sea Water; WI = Wipe; O = Oil; WW = Waste Water; A = Air

Field Comments

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking # 772865107255

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	B.J. Belill	7/30/18 17:25		2	7/31/18 15:30	8/1/18 13
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: Y

Cooler Temp. 3.2 Thermo. Corr. Factor NA 0.0

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/01/2018 01:15:00 PM

Work Order #: 594383

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08/02/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/02/2018
Jessica Kramer

Analytical Report 601965

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Big Sinks 3-25-31

17-OCT-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

17-OCT-18

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **601965**
PLU Big Sinks 3-25-31
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 601965. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 601965 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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Sample Cross Reference 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS11	S	10-09-18 11:15	6 In	601965-001
SS12	S	10-09-18 11:35	6 In	601965-002
SS13	S	10-09-18 12:05	6 In	601965-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Big Sinks 3-25-31

Project ID:
Work Order Number(s): *601965*

Report Date: *17-OCT-18*
Date Received: *10/10/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3066632 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 601915-008 S,601915-008 SD.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3066646 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 601965

LT Environmental, Inc., Arvada, CO

Project Name: PLU Big Sinks 3-25-31

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Oct-10-18 01:55 pm
Report Date: 17-OCT-18
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	601965-001		601965-002		601965-003					
	Field Id:	SS11		SS12		SS13					
	Depth:	6- In		6- In		6- In					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Oct-09-18 11:15		Oct-09-18 11:35		Oct-09-18 12:05					
BTEX by EPA 8021B	*Extracted:*	Oct-14-18 17:00		Oct-16-18 14:00		Oct-16-18 14:00					
	Analyzed:	Oct-16-18 15:07		Oct-16-18 19:10		Oct-16-18 19:31					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
Toluene		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
Ethylbenzene		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
m,p-Xylenes		<0.0200	0.0200	<0.00403	0.00403	<0.00398	0.00398				
o-Xylene		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
Total Xylenes		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
Total BTEX		<0.0100	0.0100	<0.00202	0.00202	<0.00199	0.00199				
Inorganic Anions by EPA 300	*Extracted:*	Oct-16-18 09:00		Oct-16-18 09:00		Oct-16-18 09:00					
	Analyzed:	Oct-16-18 14:00		Oct-16-18 14:05		Oct-16-18 14:28					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.98	4.98	<4.96	4.96	<5.00	5.00				
TPH by SW8015 Mod	*Extracted:*	Oct-15-18 16:00		Oct-15-18 16:00		Oct-15-18 16:00					
	Analyzed:	Oct-15-18 22:58		Oct-15-18 23:16		Oct-15-18 23:35					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		17.7	15.0	25.8	15.0	<14.9	14.9				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9				
Total TPH		17.7	15.0	25.8	15.0	16.1	14.9				

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-001	Date Collected:	10.09.18 11.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	CHE	Date Prep:	10.16.18 09.00	Basis:	Wet Weight
Seq Number:	3066546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	10.16.18 14.00	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.15.18 16.00	Basis:	Wet Weight
Seq Number:	3066670				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**17.7**	15.0	mg/kg	10.15.18 22.58		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 22.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 22.58	U	1
Total TPH	PHC635	**17.7**	15.0	mg/kg	10.15.18 22.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	10.15.18 22.58	
o-Terphenyl	84-15-1	93	%	70-135	10.15.18 22.58	

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-001	Date Collected:	10.09.18 11.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.14.18 17.00	Basis:	Wet Weight
Seq Number:	3066632				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	10.16.18 15.07	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1
Total BTEX		<0.0100	0.0100	mg/kg	10.16.18 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	10.16.18 15.07	
4-Bromofluorobenzene	460-00-4	94	%	70-130	10.16.18 15.07	

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-002	Date Collected:	10.09.18 11.35	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	CHE	Date Prep:	10.16.18 09.00	Basis:	Wet Weight
Seq Number:	3066546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	10.16.18 14.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.15.18 16.00	Basis:	Wet Weight
Seq Number:	3066670				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**25.8**	15.0	mg/kg	10.15.18 23.16		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	10.15.18 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	10.15.18 23.16	U	1
Total TPH	PHC635	**25.8**	15.0	mg/kg	10.15.18 23.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	10.15.18 23.16	
o-Terphenyl	84-15-1	108	%	70-135	10.15.18 23.16	

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-002	Date Collected:	10.09.18 11.35	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.16.18 19.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.16.18 19.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	10.16.18 19.10	
1,4-Difluorobenzene	540-36-3	111	%	70-130	10.16.18 19.10	

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-003	Date Collected:	10.09.18 12.05	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	CHE	Date Prep:	10.16.18 09.00	Basis:	Wet Weight
Seq Number:	3066546				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	10.16.18 14.28	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	10.15.18 16.00	Basis:	Wet Weight
Seq Number:	3066670				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	10.15.18 23.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	10.15.18 23.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	10.15.18 23.35	U	1
Total TPH	PHC635	**16.1**	14.9	mg/kg	10.15.18 23.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	10.15.18 23.35	
o-Terphenyl	84-15-1	94	%	70-135	10.15.18 23.35	

Certificate of Analytical Results 601965

LT Environmental, Inc., Arvada, CO

PLU Big Sinks 3-25-31

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	10.10.18 13.55
Lab Sample Id:	601965-003	Date Collected:	10.09.18 12.05	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	10.16.18 14.00	Basis:	Wet Weight
Seq Number:	3066646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.16.18 19.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.16.18 19.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	10.16.18 19.31	
1,4-Difluorobenzene	540-36-3	126	%	70-130	10.16.18 19.31	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 601965

LT Environmental, Inc.

PLU Big Sinks 3-25-31

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3066546 — Matrix: Solid — Date Prep: 10.16.18
MB Sample Id: 7664185-1-BLK — LCS Sample Id: 7664185-1-BKS — LCSD Sample Id: 7664185-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	249	100	90-110	1	20	mg/kg	10.16.18 12:17	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3066546 — Matrix: Soil — Date Prep: 10.16.18
Parent Sample Id: 601964-003 — MS Sample Id: 601964-003 S — MSD Sample Id: 601964-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	552	249	815	106	806	102	90-110	1	20	mg/kg	10.16.18 12:34	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3066546 — Matrix: Soil — Date Prep: 10.16.18
Parent Sample Id: 601966-001 — MS Sample Id: 601966-001 S — MSD Sample Id: 601966-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.0	249	290	105	278	100	90-110	4	20	mg/kg	10.16.18 14:17	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3066670 — Matrix: Solid — Date Prep: 10.15.18
MB Sample Id: 7664243-1-BLK — LCS Sample Id: 7664243-1-BKS — LCSD Sample Id: 7664243-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	889	89	874	87	70-135	2	20	mg/kg	10.15.18 19:53	
Diesel Range Organics (DRO)	<8.13	1000	967	97	981	98	70-135	1	20	mg/kg	10.15.18 19:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		114		118		70-135	%	10.15.18 19:53
o-Terphenyl	102		90		116		70-135	%	10.15.18 19:53

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Final 1.000

QC Summary 601965

LT Environmental, Inc.

PLU Big Sinks 3-25-31

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3066670 — Matrix: Soil — Date Prep: 10.15.18
Parent Sample Id: 601964-001 — MS Sample Id: 601964-001 S — MSD Sample Id: 601964-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	908	998	1620	71	1570	66	70-135	3	20	mg/kg	10.16.18 09:15	X
Diesel Range Organics (DRO)	13700	998	13100	0	12600	0	70-135	4	20	mg/kg	10.16.18 09:15	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		95		70-135	%	10.16.18 09:15
o-Terphenyl	90		101		70-135	%	10.16.18 09:15

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3066632 — Matrix: Solid — Date Prep: 10.14.18
MB Sample Id: 7664300-1-BLK — LCS Sample Id: 7664300-1-BKS — LCSD Sample Id: 7664300-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.601	120	0.600	120	70-130	0	35	mg/kg	10.16.18 05:07	
Toluene	<0.00228	0.500	0.487	97	0.490	98	70-130	1	35	mg/kg	10.16.18 05:07	
Ethylbenzene	<0.0100	0.500	0.574	115	0.569	114	70-130	1	35	mg/kg	10.16.18 05:07	
m,p-Xylenes	<0.0200	1.00	1.22	122	1.18	118	70-130	3	35	mg/kg	10.16.18 05:07	
o-Xylene	<0.0100	0.500	0.586	117	0.563	113	70-130	4	35	mg/kg	10.16.18 05:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		93		90		70-130	%	10.16.18 05:07
4-Bromofluorobenzene	88		113		110		70-130	%	10.16.18 05:07

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3066646 — Matrix: Solid — Date Prep: 10.16.18
MB Sample Id: 7664314-1-BLK — LCS Sample Id: 7664314-1-BKS — LCSD Sample Id: 7664314-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.108	107	0.109	109	70-130	1	35	mg/kg	10.16.18 17:03	
Toluene	<0.00202	0.101	0.0934	92	0.0938	94	70-130	0	35	mg/kg	10.16.18 17:03	
Ethylbenzene	<0.00202	0.101	0.107	106	0.108	108	70-130	1	35	mg/kg	10.16.18 17:03	
m,p-Xylenes	<0.00403	0.202	0.221	109	0.223	111	70-130	1	35	mg/kg	10.16.18 17:03	
o-Xylene	<0.00202	0.101	0.106	105	0.109	109	70-130	3	35	mg/kg	10.16.18 17:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		106		114		70-130	%	10.16.18 17:03
4-Bromofluorobenzene	86		108		112		70-130	%	10.16.18 17:03

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 601965

LT Environmental, Inc.

PLU Big Sinks 3-25-31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3066632 Matrix: Soil Date Prep: 10.14.18
Parent Sample Id: 601915-008 MS Sample Id: 601915-008 S MSD Sample Id: 601915-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.891	178	0.870	174	70-130	2	35	mg/kg	10.16.18 05:49	X
Toluene	0.0261	0.500	0.576	110	0.475	90	70-130	19	35	mg/kg	10.16.18 05:49	
Ethylbenzene	0.0817	0.500	0.680	120	0.552	94	70-130	21	35	mg/kg	10.16.18 05:49	
m,p-Xylenes	0.308	1.00	1.53	122	1.73	142	70-130	12	35	mg/kg	10.16.18 05:49	X
o-Xylene	<0.0100	0.500	0.0181	4	0.422	84	70-130	184	35	mg/kg	10.16.18 05:49	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		108		70-130	%	10.16.18 05:49
4-Bromofluorobenzene	174	**	537	**	70-130	%	10.16.18 05:49

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3066646 Matrix: Soil Date Prep: 10.16.18
Parent Sample Id: 602090-001 MS Sample Id: 602090-001 S MSD Sample Id: 602090-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0951	95	0.0969	96	70-130	2	35	mg/kg	10.16.18 17:46	
Toluene	<0.00200	0.100	0.0809	81	0.0836	83	70-130	3	35	mg/kg	10.16.18 17:46	
Ethylbenzene	<0.00200	0.100	0.0924	92	0.0957	95	70-130	4	35	mg/kg	10.16.18 17:46	
m,p-Xylenes	<0.00401	0.200	0.188	94	0.196	98	70-130	4	35	mg/kg	10.16.18 17:46	
o-Xylene	<0.00200	0.100	0.0917	92	0.0937	93	70-130	2	35	mg/kg	10.16.18 17:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		95		70-130	%	10.16.18 17:46
4-Bromofluorobenzene	99		79		70-130	%	10.16.18 17:46

MS/MSD Percent Recovery	[D] = 100*(C-A) / B	LCS = Laboratory Control Sample	MS = Matrix Spike
Relative Percent Difference	RPD = 200* | (C-E) / (C+E) |	A = Parent Result	B = Spike Added
LCS/LCSD Recovery	[D] = 100 * (C) / [B]	C = MS/LCS Result	D = MSD/LCSD % Rec
Log Difference	Log Diff. = Log(Sample Duplicate) - Log(Original Sample)	E = MSD/LCSD Result	

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
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www.xenco.com

Xenco Quote # | Xenco Job # 160146

Client / Reporting Information

Company Name / Branch: LTE
Company Address: Midland, Tx. 79705
3300 N 'A' street Building 1 unit 103
Email: Abaker@LTenv.com Phone No: (432)704-5178
Project Contact: Adrian Baker
Samplers's Name: Garrett Green

Project Information

Project Name/Number: PLU Big Sinks 3-25-31
Project Location: Carlsbad, NM
Invoice To: XTO Kyle Littrell
PO Number: ZRP 4470

Analytical Information

BTEX 8021 (only BTEX)
TPH (MRO GRO DRO) 8015
Chloride (300.0)

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX 8021 (only BTEX)	TPH (MRO GRO DRO) 8015	Chloride (300.0)	Field Comments
1	SS11	6"	10/9/18	1115	S	1								X	X	X	X	
2	SS12	6"	10/9/18	1135	S	1								X	X	X	X	
3	SS13	6"	10/9/18	1205	S	1								X	X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Garrett Green 10/9/18

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Garrett Green	10/9/18 3:05				
2					10/9 1530	Rachel 10/10/18
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						1355
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: Cooler Temp: Thermo. Corr. Factor
						NO 0.3 1.000

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. 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 Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/10/2018 01:55:00 PM

Work Order #: 601965

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 10/10/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 10/10/2018
Jessica Kramer

ENSOLUM

APPENDIX B

Well Permit C-01914

File

READ INSTRUCTIONS ON BACK

Revised March 1979

APPLICATION TO APPROPRIATE UNDERGROUND WATERS IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

456769
87794
1

1. Name and Address of Applicant:

Perry R. Bass

P. O. Box 2760

Midland, Texas 79702

File No. C-1914

Received: July 23, 1980

2. Describe well location under one of the following subheadings:

a. SE ¼ NW ¼ NE ¼ of Sec. 4 Twp. 25S Rge. 31E N.M.P.M., in Eddy County.

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

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

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

e. Give street address or route and box No. of property upon which well is to be located, or location by direction and distance from known landmarks 17 miles ESE from Malaga, New Mexico

3. Approximate depth (if known) 525 feet; outside diameter of casing 7 inches.

Name of driller (if known) Unknown at this time

4. Use of water (check appropriate box or boxes):

- ☐ One household, non-commercial trees, lawn and garden not to exceed 1 acre.
- ☐ Livestock watering.
- ☐ More than one household, non-commercial trees, lawns and gardens not to exceed a total of 1 acre.
- ☐ Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.
- ☒ Prospecting, mining or drilling operations to discover or develop natural resources.
- ☐ Construction of public works, highways and roads.

If any of the last four were marked, give name and nature of business under Remarks. (Item 5)

STATE ENGINEER OFFICE ROSWELL, N.M. '80 JUL 23 AM 8 42

5. Remarks: Water supply well for the drilling of Poker Lake Unit #50

Tele-Com. Steven Smith

I, Mike Waygood, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

Perry R. Bass, Applicant

By: Mike Waygood

Water Well Never Drilled Reported 2-25-81 JRS

Date: July 22, 1980

**In the event any water is encountered in any formation above the Santa Rosa formation. Condition #2 will be complied with.

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to the specific conditions numbered ** 3, 5a & 5d & 6 on the reverse side hereof. This permit will automatically expire unless this well is drilled or driven and the well record filed on or before July 31, 1981.

S.E. Reynolds, State Engineer

By: Delbert W. Nelson

Delbert W. Nelson
Assistant District II Supervisor

Date: July 24, 1980

METER REQUIRED
SEE CONDITION OF APPROVAL No. 5a, 5d.

File No. C-1914

Log Filed:

Not Drilled

GENERAL CONDITIONS OF APPROVAL

A. The maximum amount of water that may be appropriated under this permit is 3 acre feet in any calendar year.

B. The well shall be drilled only by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated. A licensed driller shall not be required for the construction of a driven well; provided, that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter (Section 72-12-12).

C. Driller's log must be filed with the State Engineer within 10 days after the well is drilled or driven. Failure to file the log within that time shall result in automatic cancellation of the permit. Log forms will be provided by the State Engineer upon request.

D. The casing shall not exceed 7 inches outside diameter except under specific conditions in which reasons satisfactory to the State Engineer are shown.

E. If the well under this permit is used at any time to serve more than one household, livestock in a commercial feed lot operation, or any other commercial purpose, the permittee shall comply with Specific Condition of Approval number 5(b).

F. In the event this well is combined with other wells permitted under Section 72-12-1 New Mexico Statutes Annotated, the total outdoor use shall not exceed the irrigation of one acre of non-commercial trees, lawn, and garden, or the equivalent outside consumptive use, and the total appropriation for household and outdoor use from the entire water distribution system shall not exceed 3 acre feet per annum.

SPECIFIC CONDITIONS OF APPROVAL

(Applicable only when so indicated on the other side of this form.)

1. Depth of the well shall not exceed the thickness of the (a) the valley fill or (b) Ogallala formation.
2. The well shall be constructed to artesian well specifications and the State Engineer shall be notified before casing is landed or cemented.
3. Appropriation and use of water under this permit shall not exceed a period of one year from the date of approval. (p) or upon completion of the project if less than 30 days.
4. Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.
5. A totalizing meter shall be installed before the first branch of the discharge line from the well and the installation shall be acceptable to the State Engineer; the Engineer shall be advised of the make, model, serial number, date of installation, and initial reading of the meter prior to appropriation of water and pumping records shall be submitted to the District Supervisor; (a) for each calendar month, on or before the 30th day of the following month (b) on or before the 10th of January, April, July and October of each year for the three preceding calendar months (c) for each calendar year on or before the 30th day of January of the following year(d) or upon completion of the project if less than 30 days.
6. The well shall be plugged upon completion of the permitted use and a plugging report shall be filed with the State Engineer within 10 days.
7. Final approval for the use of the well shall be dependent upon a leakage test made by the State Engineer.
8. Use shall be limited strictly to household and/or drinking and sanitary purposes; water shall be conveyed from the well to the place of use in closed conduit and the effluent returned to the underground so that it will not appear on the surface. No irrigation of lawns, gardens, trees or use in any type of pool or pond is authorized under this permit.

INSTRUCTIONS

The application shall be made in the name of the actual user of the well for the purpose specified in the application.

The application shall be executed in triplicate and forwarded with a $1.00 filing fee to the State Engineer.

A separate application must be filed for each well to be drilled or used.

If well to be used is an existing well, an explanation (and file number, if possible) should be given under Remarks. (Item 5.)

Applications for appropriation, well logs and request for information in the following basins should be addressed to the State Engineer at the location indicated:

Bluewater, Estancia, Rio Grande, Sandia and San Juan Basins
District No. 1, 2340 Menaul NE, Room 206, Albuquerque, New Mexico 87107

Capitan, Carlsbad, Fort Sumner, Hondo, Jal, Lea, Penasco, Portales, Roswell, and Upper Pecos Basins
District No. 2, Box 1717, Roswell, New Mexico 88201

Animas, Gila-San Francisco, Hot Springs, Las Animas Creek, Lordsburg, Mimbres, Nutt-Hockett, Playas, San Simon, and Virden Valley Basins
District No. 3, Box 844, Deming, New Mexico 88030

Canadian River Basin
State Engineer, State Capitol, Bataan Memorial Bldg., Santa Fe, New Mexico 87503

GX

'80 JUL 25 PM 2 58

STATE ENGINEER
SANTA FE, N.M.

July 23, 1980

FILE: C-1914

Perry R. Bass
P.O. Box 2760
Midland, Texas 79702

Attn: Mike Waygood

Dear Mr. Bass:

Enclosed is your copy of Application to Appropriate Underground Waters in Accordance with Section 72-12-1 New Mexico Statutes, as numbered above, which has been approved subject to the conditions on the permit.

Please note that in the event any water is encountered in any formation above the Santa Rosa Formation, Condition # 2 will be complied with. Specific Condition of Approval No. 2 states: "The well shall be constructed to artesian well specifications and the State Engineer Office shall be notified before casing is landed or cemented." Since a representative from this office must inspect the casing and witness the cementing, we must be notified 24 hours prior to landing and cementing.

If you have any questions concerning the above matter, please do not hesitate to contact our office.

Yours truly,

R. B. Collins, Jr.
Area Supervisor

RBC:pks
encl.
cc: Santa Fe

ENSOLUM

APPENDIX C

Lithologic/Soil Sampling Logs (2024 and 2025)

ENSOLUM

Sample Name: SS07	Date: 2/16/24; 6/27/25
Site Name: PLU Big Sinks 3-25-31 Battery	
Incident Number: nAB1731042349	
Job Number: 03C1558231	

LITHOLOGIC / SOIL SAMPLING LOG

	Logged By: CW/US	Method: Hand Auger; Hydrovac
Coordinates: 32.164579, -103.778337	Hole Diameter: 3"; 8"	Total Depth: 2'2"

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. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
	<168	0	N	SS07 (2/16/24)	0.5	0.5	SP	(0.5') SAND with some silt and low plasticity clay, brown, no odor.
M	<156.8	0	N	SS07A (6/27/25)	1	1	SP-SC	(1-2') SAND with clay, brown, fine grain, low plasticity, no odor.
						1.5		
M	<156.8	0	N	SS07B (6/27/25)	2	2		SAND with clay, brown, fine grain, low plasticity, bedded sandstone, friable, tan, no odor.

Refusal @ 2 ft 2 in bgs

ENSOLUM

	Sample Name: SS08	Date: 2/16/24; 6/27/25
	Site Name: PLU Big Sinks 3-25-31 Battery	
	Incident Number: nAB1731042349	
	Job Number: 03C1558231	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CW/US	Method: Hand Auger; Hydrovac
Coordinates: 32.164694, -103.778369	Hole Diameter: 3"; 8"	Total Depth: 2'2"

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. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
	<168	0	N	SS08 (2/16/24)	1	1	SP	(1') SAND with some silt and low plasticity clay, brown, no odor.
D	<156.8	0	N	SS08A (6/27/25)	2	2	SW	(2') SAND with trace silt, light brown, coarse - fine grain, bedded sandstone, moderately consolidated and friable; no odor.
						3		

Refusal @ 2 ft 2 in bgs

ENSOLUM

Sample Name: SS09	Date: 2/16/24; 6/27/25
Site Name: PLU Big Sinks 3-25-31 Battery	
Incident Number: nAB1731042349	
Job Number: 03C1558231	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: CW/US / Method: Hand Auger; Hydrovac
Coordinates: 32.164616, -103.778347	Hole Diameter: 3"; 8" / Total Depth: 2'3"

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. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
						0.5		
						1		
	<168	0	N	SS09 (2/16/24)	1.5	1.5	CCHE	(1.5') CALICHE, tan with sand, brown, very fine grained, no odor.
M	<156.8	0	N	SS09A (6/27/25)	2	2	SP-SC	(2) SAND with clay, brown, fine grain, medium plasticity, bedded sandstone, friable, tan; no odor.
								Refusal @ 2 ft 3 in bgs

ENSOLUM

	Sample Name: SS14	Date: 6/27/25
	Site Name: PLU Big Sinks 3-25-31 Battery	
	Incident Number: nAB1731042349	
	Job Number: 03C1558231	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: US	Method: Hydrovac
Coordinates: 32.164739, -103.778381	Hole Diameter: 8"	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. 40% correction factors included.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<156.8	0.0	N	SS14A	1	1	SP	(1) SAND with some clay, brown, fine grain, low plasticity, and lemon scent.
M	<156.8	0.0	N	SS14B	2	2	SC	(2) Clayey SAND, brown, fine grain, medium plasticity, and no odor.
M	<156.8	0.0	N	SS14C	3	3	SW-SC	(3) SAND with clay, brown, fine grain, medium plasticity, bedded sandtone layer, tan, friable; no odor.
Refusal @ 3 ft bgs								

ENSOLUM

APPENDIX D

Photographic Log (2024 and 2025)

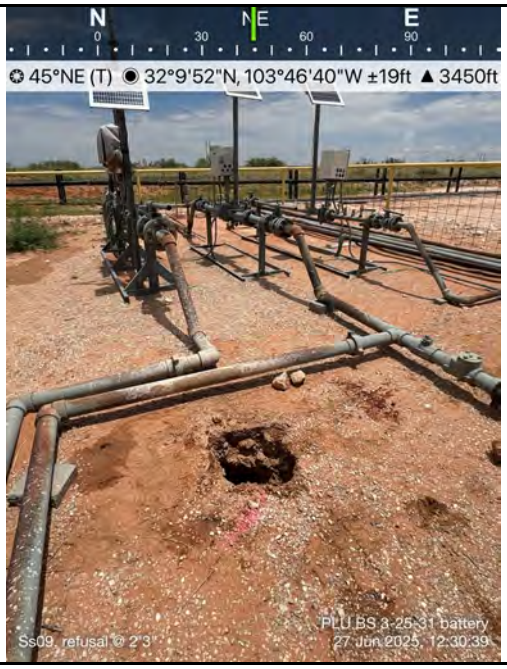
ENSOLUM

Photographic Log
XTO Energy, Inc
PLU Big Sinks 3-25-31 Battery
Incident Number nAB1731042349

Photograph 1 Date: 02/16/2024
Description: SS07
View: Northwest

Photograph 2 Date: 02/16/2024
Description: SS08
View: Northwest

Photograph 3 Date: 06/27/2025
Description: SS14
View: Southeast



Photograph 4 Date: 06/27/2025
Description: SS09
View: Northeast

ENSOLUM

APPENDIX E

Laboratory Analytical Reports and Chain of Custody Documentation (2024 and 2025)

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 2/26/2024 3:23:29 PM

JOB DESCRIPTION

PLU BIG SINKS 3 - 25 - 31 BATTERY
03C1558231

JOB NUMBER

890-6203-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

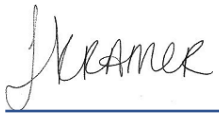
Eurofins Carlsbad

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
2/26/2024 3:23:29 PM

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

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Laboratory Job ID: 890-6203-1
SDG: 03C1558231

Table of Contents

Definitions/Glossary

Client: Ensolum Job ID: 890-6203-1
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY SDG: 03C1558231

Qualifiers

GC VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.

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 Job ID: 890-6203-1
Project: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1 Eurofins Carlsbad

Job Narrative
890-6203-1

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 2/16/2024 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C.

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SS 07 (890-6203-1), SS 08 (890-6203-2) and SS 09 (890-6203-3).

GC VOA
Method 8021B: The surrogate recovery for the blank associated with preparation batch 880-73795 and analytical batch 880-73826 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.

GC Semi VOA
Method 8015MOD_NM: The surrogate recovery for the blank associated with preparation batch 880-73653 and analytical batch 880-73706 was outside the upper control limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: SS 09 (890-6203-3), (880-39545-A-2-B), (880-39545-A-2-C MS) and (880-39545-A-2-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-73653 and analytical batch 880-73706 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 method blank for preparation batch 880-73653 and analytical batch 880-73706 contained Gasoline Range Organics (GRO)-C6-C10 above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

HPLC/IC
Method 300_ORGFM_28D - Soluble: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-73608 and analytical batch 880-73693 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 BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Client Sample ID: SS 07

Date Collected: 02/16/24 10:00
Date Received: 02/16/24 13:00
Sample Depth: 05

Lab Sample ID: 890-6203-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		02/21/24 14:04	02/24/24 04:47	1
Toluene	<0.00202	U	0.00202		mg/Kg		02/21/24 14:04	02/24/24 04:47	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		02/21/24 14:04	02/24/24 04:47	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		02/21/24 14:04	02/24/24 04:47	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		02/21/24 14:04	02/24/24 04:47	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		02/21/24 14:04	02/24/24 04:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/21/24 14:04*	*02/24/24 04:47*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*02/21/24 14:04*	*02/24/24 04:47*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			02/24/24 04:47	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**462**		50.4		mg/Kg			02/22/24 01:46	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.4	U	50.4		mg/Kg		02/20/24 11:29	02/22/24 01:46	1
Diesel Range Organics (Over C10-C28)	**462**		50.4		mg/Kg		02/20/24 11:29	02/22/24 01:46	1
OII Range Organics (Over C28-C36)	<50.4	U	50.4		mg/Kg		02/20/24 11:29	02/22/24 01:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*83*		*70 - 130*	*02/20/24 11:29*	*02/22/24 01:46*	*1*
o-Terphenyl	*90*		*70 - 130*	*02/20/24 11:29*	*02/22/24 01:46*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**69.4**		4.95		mg/Kg			02/21/24 02:55	1

Client Sample ID: SS 08

Date Collected: 02/16/24 10:05
Date Received: 02/16/24 13:00
Sample Depth: 1

Lab Sample ID: 890-6203-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 05:08	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 05:08	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 05:08	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		02/21/24 14:04	02/24/24 05:08	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 05:08	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		02/21/24 14:04	02/24/24 05:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*02/21/24 14:04*	*02/24/24 05:08*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Client Sample ID: SS 08

Date Collected: 02/16/24 10:05
Date Received: 02/16/24 13:00
Sample Depth: 1

Lab Sample ID: 890-6203-2

Matrix: Solid

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*115*		*70 - 130*	*02/21/24 14:04*	*02/24/24 05:08*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399	mg/Kg			02/24/24 05:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**591**		50.5	mg/Kg			02/22/24 02:32	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.5	U	50.5	mg/Kg		02/20/24 11:29	02/22/24 02:32	1
Diesel Range Organics (Over C10-C28)	**591**		50.5	mg/Kg		02/20/24 11:29	02/22/24 02:32	1
OII Range Organics (Over C28-C36)	<50.5	U	50.5	mg/Kg		02/20/24 11:29	02/22/24 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*120*		*70 - 130*	*02/20/24 11:29*	*02/22/24 02:32*	*1*
o-Terphenyl	*127*		*70 - 130*	*02/20/24 11:29*	*02/22/24 02:32*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**102**		4.96	mg/Kg			02/21/24 03:02	1

Client Sample ID: SS 09

Date Collected: 02/16/24 10:10
Date Received: 02/16/24 13:00
Sample Depth: 1.5

Lab Sample ID: 890-6203-3

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		02/21/24 14:04	02/24/24 05:28	1
Toluene	<0.00198	U	0.00198	mg/Kg		02/21/24 14:04	02/24/24 05:28	1
Ethylbenzene	<0.00198	U	0.00198	mg/Kg		02/21/24 14:04	02/24/24 05:28	1
m-Xylene & p-Xylene	<0.00396	U	0.00396	mg/Kg		02/21/24 14:04	02/24/24 05:28	1
o-Xylene	<0.00198	U	0.00198	mg/Kg		02/21/24 14:04	02/24/24 05:28	1
Xylenes, Total	<0.00396	U	0.00396	mg/Kg		02/21/24 14:04	02/24/24 05:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*	*02/21/24 14:04*	*02/24/24 05:28*	*1*
1,4-Difluorobenzene (Surr)	*117*		*70 - 130*	*02/21/24 14:04*	*02/24/24 05:28*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396	mg/Kg			02/24/24 05:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	**194**		49.9	mg/Kg			02/22/24 02:55	1

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Client Sample ID: SS 09
Date Collected: 02/16/24 10:10
Date Received: 02/16/24 13:00
Sample Depth: 1.5

Lab Sample ID: 890-6203-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		02/20/24 11:29	02/22/24 02:55	1
Diesel Range Organics (Over C10-C28)	**194**		49.9		mg/Kg		02/20/24 11:29	02/22/24 02:55	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		02/20/24 11:29	02/22/24 02:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*36*	*S1-*	*70 - 130*	*02/20/24 11:29*	*02/22/24 02:55*	*1*
o-Terphenyl	*34*	*S1-*	*70 - 130*	*02/20/24 11:29*	*02/22/24 02:55*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**86.7**		4.95		mg/Kg			02/21/24 03:08	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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)
890-6201-A-1-C MS	Matrix Spike	129	104
890-6201-A-1-D MSD	Matrix Spike Duplicate	113	97
890-6203-1	SS 07	113	111
890-6203-2	SS 08	113	115
890-6203-3	SS 09	116	117
LCS 880-73795/1-A	Lab Control Sample	104	99
LCSD 880-73795/2-A	Lab Control Sample Dup	108	103
MB 880-73777/5-A	Method Blank	124	123
MB 880-73795/5-A	Method Blank	135 S1+	126

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)
880-39545-A-2-C MS	Matrix Spike	74	68 S1-
880-39545-A-2-D MSD	Matrix Spike Duplicate	74	68 S1-
890-6203-1	SS 07	83	90
890-6203-2	SS 08	120	127
890-6203-3	SS 09	36 S1-	34 S1-
LCS 880-73653/2-A	Lab Control Sample	88	88
LCSD 880-73653/3-A	Lab Control Sample Dup	88	87
MB 880-73653/1-A	Method Blank	148 S1+	159 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-73777/5-A
Matrix: Solid
Analysis Batch: 73826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73777

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/21/24 12:24	02/23/24 14:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/21/24 12:24	02/23/24 14:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/21/24 12:24	02/23/24 14:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/21/24 12:24	02/23/24 14:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/21/24 12:24	02/23/24 14:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/21/24 12:24	02/23/24 14:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*124*		*70 - 130*	*02/21/24 12:24*	*02/23/24 14:14*	*1*
1,4-Difluorobenzene (Surr)	*123*		*70 - 130*	*02/21/24 12:24*	*02/23/24 14:14*	*1*

Lab Sample ID: MB 880-73795/5-A
Matrix: Solid
Analysis Batch: 73826

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 73795

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 01:55	1
Toluene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 01:55	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 01:55	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		02/21/24 14:04	02/24/24 01:55	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		02/21/24 14:04	02/24/24 01:55	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		02/21/24 14:04	02/24/24 01:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	*S1+*	*70 - 130*	*02/21/24 14:04*	*02/24/24 01:55*	*1*
1,4-Difluorobenzene (Surr)	*126*		*70 - 130*	*02/21/24 14:04*	*02/24/24 01:55*	*1*

Lab Sample ID: LCS 880-73795/1-A
Matrix: Solid
Analysis Batch: 73826

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 73795

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1249		mg/Kg		125	70 - 130		
Toluene			0.100	0.1028		mg/Kg		103	70 - 130		
Ethylbenzene			0.100	0.1129		mg/Kg		113	70 - 130		
m-Xylene & p-Xylene			0.200	0.2038		mg/Kg		102	70 - 130		
o-Xylene			0.100	0.1059		mg/Kg		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 880-73795/2-A
Matrix: Solid
Analysis Batch: 73826

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 73795

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1249		mg/Kg		125	70 - 130	0	35

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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

Lab Sample ID: LCSD 880-73795/2-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73826 — **Prep Batch: 73795**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene			0.100	0.1061		mg/Kg		106	70 - 130	3	35
Ethylbenzene			0.100	0.1195		mg/Kg		119	70 - 130	6	35
m-Xylene & p-Xylene			0.200	0.2261		mg/Kg		113	70 - 130	10	35
o-Xylene			0.100	0.1091		mg/Kg		109	70 - 130	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: 890-6201-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73826 — **Prep Batch: 73795**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U	0.101	0.09997		mg/Kg		99	70 - 130
Toluene	<0.00199	U	0.101	0.08753		mg/Kg		87	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.1009		mg/Kg		100	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.202	0.2151		mg/Kg		107	70 - 130
o-Xylene	<0.00199	U	0.101	0.1058		mg/Kg		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*129*		*70 - 130*
1,4-Difluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: 890-6201-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73826 — **Prep Batch: 73795**

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	0.1010		mg/Kg		101	70 - 130	1	35
Toluene	<0.00199	U	0.100	0.08910		mg/Kg		89	70 - 130	2	35
Ethylbenzene	<0.00199	U	0.100	0.09544		mg/Kg		95	70 - 130	6	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.2031		mg/Kg		102	70 - 130	6	35
o-Xylene	<0.00199	U	0.100	0.09952		mg/Kg		99	70 - 130	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

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

Lab Sample ID: MB 880-73653/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		02/20/24 11:29	02/21/24 20:15	1

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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

Lab Sample ID: MB 880-73653/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		02/20/24 11:29	02/21/24 20:15	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		02/20/24 11:29	02/21/24 20:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*148*	*S1+*	*70 - 130*	*02/20/24 11:29*	*02/21/24 20:15*	*1*
o-Terphenyl	*159*	*S1+*	*70 - 130*	*02/20/24 11:29*	*02/21/24 20:15*	*1*

Lab Sample ID: LCS 880-73653/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10			1000	944.0		mg/Kg		94	70 - 130		
Diesel Range Organics (Over C10-C28)			1000	979.2		mg/Kg		98	70 - 130		

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

Lab Sample ID: LCSD 880-73653/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	964.6		mg/Kg		96	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	984.1		mg/Kg		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*88*		*70 - 130*
o-Terphenyl	*87*		*70 - 130*

Lab Sample ID: 880-39545-A-2-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

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	1010	1101		mg/Kg		105	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	665.3	F1	mg/Kg		63	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*68*	*S1-*	*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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

Lab Sample ID: 880-39545-A-2-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 73706 — **Prep Batch: 73653**

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	1010	1113		mg/Kg		106	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	<49.9	U F1	1010	661.7	F1	mg/Kg		63	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*74*		*70 - 130*
o-Terphenyl	*68*	*S1-*	*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-73608/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 73693

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			02/20/24 23:53	1

Lab Sample ID: LCS 880-73608/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 73693

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	251.7		mg/Kg		101	90 - 110		

Lab Sample ID: LCSD 880-73608/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 73693

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	258.8		mg/Kg		104	90 - 110	3	20

Lab Sample ID: 880-39529-A-49-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 73693

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	728	F1	248	927.3	F1	mg/Kg		80	90 - 110		

Lab Sample ID: 880-39529-A-49-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Soluble**
Analysis Batch: 73693

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	728	F1	248	939.7	F1	mg/Kg		85	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

GC VOA

Prep Batch: 73777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-73777/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 73795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	5035	
890-6203-2	SS 08	Total/NA	Solid	5035	
890-6203-3	SS 09	Total/NA	Solid	5035	
MB 880-73795/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-73795/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-73795/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-6201-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
890-6201-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 73826

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	8021B	73795
890-6203-2	SS 08	Total/NA	Solid	8021B	73795
890-6203-3	SS 09	Total/NA	Solid	8021B	73795
MB 880-73777/5-A	Method Blank	Total/NA	Solid	8021B	73777
MB 880-73795/5-A	Method Blank	Total/NA	Solid	8021B	73795
LCS 880-73795/1-A	Lab Control Sample	Total/NA	Solid	8021B	73795
LCSD 880-73795/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	73795
890-6201-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	73795
890-6201-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	73795

Analysis Batch: 74091

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	Total BTEX	
890-6203-2	SS 08	Total/NA	Solid	Total BTEX	
890-6203-3	SS 09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 73653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	8015NM Prep	
890-6203-2	SS 08	Total/NA	Solid	8015NM Prep	
890-6203-3	SS 09	Total/NA	Solid	8015NM Prep	
MB 880-73653/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-73653/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-73653/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-39545-A-2-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-39545-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 73706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	8015B NM	73653
890-6203-2	SS 08	Total/NA	Solid	8015B NM	73653
890-6203-3	SS 09	Total/NA	Solid	8015B NM	73653
MB 880-73653/1-A	Method Blank	Total/NA	Solid	8015B NM	73653
LCS 880-73653/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	73653

QC Association Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

GC Semi VOA (Continued)

Analysis Batch: 73706 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-73653/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	73653
880-39545-A-2-C MS	Matrix Spike	Total/NA	Solid	8015B NM	73653
880-39545-A-2-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	73653

Analysis Batch: 73841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Total/NA	Solid	8015 NM	
890-6203-2	SS 08	Total/NA	Solid	8015 NM	
890-6203-3	SS 09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 73608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Soluble	Solid	DI Leach	
890-6203-2	SS 08	Soluble	Solid	DI Leach	
890-6203-3	SS 09	Soluble	Solid	DI Leach	
MB 880-73608/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-73608/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-73608/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-39529-A-49-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-39529-A-49-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 73693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-6203-1	SS 07	Soluble	Solid	300.0	73608
890-6203-2	SS 08	Soluble	Solid	300.0	73608
890-6203-3	SS 09	Soluble	Solid	300.0	73608
MB 880-73608/1-A	Method Blank	Soluble	Solid	300.0	73608
LCS 880-73608/2-A	Lab Control Sample	Soluble	Solid	300.0	73608
LCSD 880-73608/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	73608
880-39529-A-49-B MS	Matrix Spike	Soluble	Solid	300.0	73608
880-39529-A-49-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	73608

Lab Chronicle

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Client Sample ID: SS 07

Date Collected: 02/16/24 10:00
Date Received: 02/16/24 13:00

Lab Sample ID: 890-6203-1
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			4.95 g	5 mL	73795	02/21/24 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73826	02/24/24 04:47	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			74091	02/24/24 04:47	SM	EET MID
Total/NA	Analysis	8015 NM		1			73841	02/22/24 01:46	SM	EET MID
Total/NA	Prep	8015NM Prep			9.92 g	10 mL	73653	02/20/24 11:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	73706	02/22/24 01:46	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	73608	02/20/24 08:04	SA	EET MID
Soluble	Analysis	300.0		1			73693	02/21/24 02:55	CH	EET MID

Client Sample ID: SS 08

Date Collected: 02/16/24 10:05
Date Received: 02/16/24 13:00

Lab Sample ID: 890-6203-2
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			5.01 g	5 mL	73795	02/21/24 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73826	02/24/24 05:08	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			74091	02/24/24 05:08	SM	EET MID
Total/NA	Analysis	8015 NM		1			73841	02/22/24 02:32	SM	EET MID
Total/NA	Prep	8015NM Prep			9.90 g	10 mL	73653	02/20/24 11:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	73706	02/22/24 02:32	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	73608	02/20/24 08:04	SA	EET MID
Soluble	Analysis	300.0		1			73693	02/21/24 03:02	CH	EET MID

Client Sample ID: SS 09

Date Collected: 02/16/24 10:10
Date Received: 02/16/24 13:00

Lab Sample ID: 890-6203-3
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			5.05 g	5 mL	73795	02/21/24 14:04	MNR	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	73826	02/24/24 05:28	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			74091	02/24/24 05:28	SM	EET MID
Total/NA	Analysis	8015 NM		1			73841	02/22/24 02:55	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	73653	02/20/24 11:29	TKC	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	73706	02/22/24 02:55	SM	EET MID
Soluble	Leach	DI Leach			5.05 g	50 mL	73608	02/20/24 08:04	SA	EET MID
Soluble	Analysis	300.0		1			73693	02/21/24 03:08	CH	EET MID

Laboratory References:

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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 BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

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 BIG SINKS 3 - 25 - 31 BATTERY

Job ID: 890-6203-1
SDG: 03C1558231

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-6203-1	SS 07	Solid	02/16/24 10:00	02/16/24 13:00	05
890-6203-2	SS 08	Solid	02/16/24 10:05	02/16/24 13:00	1
890-6203-3	SS 09	Solid	02/16/24 10:10	02/16/24 13:00	1.5

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:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	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 Big Sinks 3-25-31 Battery	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558231	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Samples Received Intact:	Yes No	Thermometer ID:	TNM007
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Temperature Reading:	2.0
Total Containers:		Corrected Temperature:	1.8

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
SS07	S	2/16/24	1000	.5	G	1			
SS08			1005	1		1			
SS09			1010	1.5		1			

890-6203 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: nAB1731042349

Cost Center: 1081021001

AFE: EW.2018.06246.EXP.01

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

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

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-6203-1
SDG Number: 03C1558231

Login Number: 6203
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: 890-6203-1
SDG Number: 03C1558231

Login Number: 6203
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 02/19/24 08:27 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	

CARDINAL Laboratories

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

July 01, 2025

TRACY HILLARD

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: PLU BIG SINKS 03-25-31 BATTERY - SPILLS

Enclosed are the results of analyses for samples received by the laboratory on 06/30/25 12:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 07A 1' (H253922-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.92	96.2	2.00	0.848	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	98.1	2.00	0.936	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	2.00	99.9	2.00	1.29	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.96	99.4	6.00	1.18	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *95.6 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *95.4 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 07B 2' (H253922-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.92	96.2	2.00	0.848	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	98.1	2.00	0.936	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	2.00	99.9	2.00	1.29	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.96	99.4	6.00	1.18	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *113 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *96.8 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *96.0 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 08A 2' (H253922-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.92	96.2	2.00	0.848	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	98.1	2.00	0.936	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	2.00	99.9	2.00	1.29	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.96	99.4	6.00	1.18	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *96.6 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *94.9 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 09A 2' (H253922-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.92	96.2	2.00	0.848	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	98.1	2.00	0.936	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	2.00	99.9	2.00	1.29	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.96	99.4	6.00	1.18	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *112 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *97.2 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *95.7 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 14A 1' (H253922-05)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.88	94.0	2.00	1.65	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	97.8	2.00	1.92	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	1.95	97.4	2.00	2.22	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.74	95.6	6.00	2.22	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.8 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *83.7 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *83.3 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 14B 2' (H253922-06)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.88	94.0	2.00	1.65	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	97.8	2.00	1.92	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	1.95	97.4	2.00	2.22	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.74	95.6	6.00	2.22	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *96.6 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	**18.0**	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *90.4 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *90.0 %* *40.6-153*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
TRACY HILLARD
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	06/30/2025	Sampling Date:	06/27/2025
Reported:	07/01/2025	Sampling Type:	Soil
Project Name:	PLU BIG SINKS 03-25-31 BATTERY - SPIl	Sampling Condition:	Cool & Intact
Project Number:	03C1558231	Sample Received By:	Shalyn Rodriguez
Project Location:	XTO 32.16468-103.77774		

Sample ID: SS 14C 3' (H253922-07)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/30/2025	ND	1.88	94.0	2.00	1.65	
Toluene*	<0.050	0.050	06/30/2025	ND	1.96	97.8	2.00	1.92	
Ethylbenzene*	<0.050	0.050	06/30/2025	ND	1.95	97.4	2.00	2.22	
Total Xylenes*	<0.150	0.150	06/30/2025	ND	5.74	95.6	6.00	2.22	
Total BTEX	<0.300	0.300	06/30/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *95.4 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/30/2025	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/30/2025	ND	192	96.2	200	2.35	
DRO >C10-C28*	<10.0	10.0	06/30/2025	ND	189	94.4	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	06/30/2025	ND					

Surrogate: 1-Chlorooctane *90.6 %* *44.4-145*

Surrogate: 1-Chlorooctadecane *89.6 %* *40.6-153*

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC	**BILL TO**
Project Manager: Katherine Khan	P.O. #:
Address: 601 N Marienfeld Street, Suite 400	Company: XTO Energy, Inc
City: Midland State: TX Zip: 79701	Attn: Colton Brown
Phone #: 303.319.9604 Fax #:	Address: 3104 E Greene St
Project #: 03C1558231 Project Owner: XTO Energy	City: Carlsbad
Project Name: PLU Big Sinks 3-25-31 Battery - SPILLS	State: NM Zip: 88220
Project Location: 32.16468, -103.77774	Phone #:
Sampler Name: Uriel Santillana	Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE:	PRESERV.: ICE / COOL	PRESERV.: OTHER:	SAMPLING: DATE	SAMPLING: TIME	TPH 8015	BTEX 8021	Chloride 4500
H253922																		
1	SS07A	1'	G	1			X					X		6/27/25	1230	X	X	X
2	SS07B	2'	↓	↓			↓					↓		↓	1235	↓	↓	↓
3	SS08A	2'													1120			
4	SS09A	2'													1222			
5	SS14A	1'													1005			
6	SS14B	2'													1012			
7	SS14C	3'													~~1000~~ 1100 US			

US

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

Relinquished By: U. Santillana	Date: 6-30-25 Time: 1210	Received By: S. Rodriguez	Verbal Result: ☐ Yes ☐ No Add'l Phone #: All Results are emailed. Please provide Email address: [redacted], TMorrissey@ensolum.com, KK@ResolutionConsultantsLLC.com, [redacted], KThomason@ensolum.com, usantillana@ensolum.com
Relinquished By:	Date: Time:	Received By:	REMARKS: Incident Number: nAB1731042349 Cost Center: 1081021001 GFCM: 48605000
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 3.8c Corrected Temp. °C 4.1c	Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No; CHECKED BY: (Initials) SR	Turnaround Time: 48 hr Standard ☐ Rush ☒ Thermometer ID #113 #140 Correction Factor -0.5°C +0.3c; Bacteria (only) Sample Condition Cool Intact ☐ Yes ☐ Yes ☐ No ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

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

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

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1731042349**
Incident Name	**NAB1731042349 POKER LAKE UNIT CVX JV BS #027H @ 30-015-42111**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-42111] POKER LAKE UNIT CVX JV BS #027H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	POKER LAKE UNIT CVX JV BS #027H
Date Release Discovered	10/28/2017
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
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	Cause: Equipment Failure | Gasket | Crude Oil | Released: 51 BBL | Recovered: 36 BBL | Lost: 15 BBL.
Produced Water Released (bbls) Details	Cause: Equipment Failure | Gasket | Produced Water | Released: 6 BBL | Recovered: 4 BBL | Lost: 2 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	*Not answered.*

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	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	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**

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: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/01/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1 and 5 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Greater than 5 (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	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1000 (ft.) and ½ (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1 and 5 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

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)	1100
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	2630
GRO+DRO (EPA SW-846 Method 8015M)	2580
BTEX (EPA SW-846 Method 8021B or 8260B)	0.1
Benzene (EPA SW-846 Method 8021B or 8260B)	0.1
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	07/25/2018
On what date will (or did) the final sampling or liner inspection occur	06/27/2025
On what date will (or was) the remediation complete(d)	07/27/2018
What is the estimated surface area (in square feet) that will be reclaimed	5275
What is the estimated volume (in cubic yards) that will be reclaimed	465
What is the estimated surface area (in square feet) that will be remediated	5275
What is the estimated volume (in cubic yards) that will be remediated	465
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.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	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	fEEM0112342028 LEA LAND LANDFILL
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: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/01/2025
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.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	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

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**477346**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**06/27/2025**
What was the (estimated) number of samples that were to be gathered	**16**
What was the sampling surface area in square feet	**1200**

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	4050
What was the total volume (cubic yards) remediated	363
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	2650
What was the total volume (in cubic yards) reclaimed	261
Summarize any additional remediation activities not included by answers (above)	Soil delineation sampling, excavation activities, and confirmation sampling were conducted at the Site to address impacted soil resulting from the October 28, 2017, release of crude oil and produced water. Following excavation both on-pad and in the pasture west of the pad, laboratory analytical results from delineation and confirmation sampling indicate that all COC concentrations were in compliance with the appropriate Closure Criteria and on-pad waste-containing soil were fully defined to the reclamation standard in the top 2 feet. Due to the presence of multiple utilities at the active Site, the release was remediated on-pad to Closure Criteria for safety reasons. Approximately 1,400 square feet of waste-containing soil was delineated within the top 2 feet and is present at sample locations SS07 through SS09. Following Site decommissioning, an estimated 104 cubic yards of waste-containing soil will be reclaimed. The presence of the waste-containing soil present on-pad does not cause an imminent risk to human health, the environment, or groundwater. XTO will reclaim this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria during final Site reclamation.
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: Ashley Mcafee Email: ashley.a.mcafee@exxonmobil.com Date: 09/01/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	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

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CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 500882
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Remediation has met 19.15.29 NMAC requirements. Soil impacts exceeding the reclamation standards have been left in place and are required to meet 19.15.29.13D (1) NMAC once the site is no longer reasonably needed for production or subsequent drilling ops.	9/12/2025