ENSOLUM

March 25, 2025

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

Re: Closure Request Addendum
Poker Lake CVX JV BS #016H
Incident Number nAB1519556419
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following *Closure Request Addendum* (*2025 Addendum)* to the original *Closure Request* dated February 11, 2019 and subsequent *Closure Request Addendum* (*2023 Addendum*) dated September 26, 2023. This *2025 Addendum* provides delineation details of waste containing soil at the Poker Lake CVX JV BS #016H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the September 26, 2023, *Closure Request Addendum*. In the denial, NMOCD stated that waste containing soil within the top four feet must be reclaimed to concentrations less than 600 milligrams per kilogram (mg/kg) chlorides, 100 mg/kg total petroleum hydrocarbons (TPH), 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 10 mg/kg benzene in areas not reasonably needed for production or subsequent drilling operations. Remediation of waste-containing soil can be deferred until Site decommissioning in areas immediately under or around production equipment if the impacts are fully delineated and do not cause an imminent risk to human health, the environment, or groundwater. Based on the additional delineation activities described below, XTO is submitting this *2025 Addendum* and requesting closure for Incident Number nAB1519556419.

RELEASE BACKGROUND

The Site is located in Unit O, Section 3, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.153395°, -103.867621°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On June 30, 2015, corrosion of a steel connection on a flow line resulted in the release of approximately 9 barrels (bbls) of produced water. Approximately 2 bbls of free-standing produced water were recovered using a vacuum truck. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 8, 2015. The release was assigned Remediation Permit (RP) Number 2RP-3103 and Incident Number nAB1519556419.

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 February 2018 and July 2018, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the June 30, 2015, produced water release. Five preliminary soil samples (SS01 through SS05) were analyzed for BTEX, TPH and chloride to assess the lateral extent of soil impacts. Laboratory analytical results indicated that BTEX and total TPH concentrations were compliant with the NMOCD Table 1 Closure Critera; however, results for soil samples SS01, SS02, and SS05 contained chloride concentrations of 10,100 mg/kg, 4,270 mg/kg, and 1,920 mg/kg, respectively, that exceeded the NMOCD remediation action level at the time of sampling of 600 mg/kg.

Approximately 100 square feet of impacted soil was removed from the western excavation in the area of the original reported release and near soil sample SS05 to depths ranging from 1 foot to 2 feet bgs. Six excavation soil samples (SS05A, SW10 through SW13, and FS04) were collected from the western excavation. Roughly 1,140 square feet of impacted soil was excavated to depths ranging from 7 feet to 10 feet bgs from the eastern excavation near the lined containment of the heater treater and preliminary soil samples SS01 and SS02. Twelve confirmation soil samples (SW01 through SW09 and FS01 through FS03) were collected from the eastern excavation. The excavations were completed prior to implementation of 19.15.29 NMAC and the Compliance Agreement so the excavation confirmation samples were collected as discrete samples instead of composite samples.

Laboratory analytical results for excavation sidewall sample SW08 exceeded 600 mg/kg so one soil boring was advanced in the lined containment area adjacent to the eastern excavation to delineate chloride concentrations to the east. Laboratory analytical results for soil boring samples BH01A and BH01B indicated that the chloride concentrations exceeded 600 mg/kg. Due to the proximity of the impacted soil to the production equipment, the eastern excavation could not be advanced to address soil with chloride concentrations exceeding 600 mg/kg as represented by SW08 and BH01 due to safety concerns and to protect the integrity of the production equipment. The excavation immediately adjacent to BH01 vertically delineates chloride concentrations to 600 mg/kg at 10 feet bgs.

Closure was requested on February 11, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO), TPH and chloride concentrations were compliant with the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the February 11, 2019 *Closure Request* that is included in the *2023 Addendum* (Appendix A).

On March 23, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1519556419 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.*

As outlined in the approved June 29, 2023 *Work Plan*, XTO installed a soil boring for determination of groundwater depth and confirmation of the Site Closure Criteria per NMOCD Table I (Closure Criteria). During August 2023, a borehole, permitted as New Mexico Office of the State Engineer (NMOSE) well C-04757, was advanced to a depth of 119 feet bgs approximately 330 feet southeast of the Site (Figure 1). No moisture or saturated soil indicative of a groundwater table was observed during drilling confirming that depth to groundwater exceeds 100 feet bgs at the Site.

Additionally, assessment soil samples SS06 through SS09 were collected from a depth of 0.5 feet bgs around the historical release extent to horizontally delineate the release. Laboratory analytical results for assessment samples SS06 through SS09 indicated all chemicals of concern (COC) concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the horizontal extent of

the release. No further action was requested for Incident Number nAB1519556419 in the *2023 Addendum* dated September 26, 2023 (Appendix A).

On October 17, 2023, NMOCD denied the *2023 Addendum* for Incident Number nAB1519556419 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. 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

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
- BTEX: 50 mg/kg
- TPH-GRO and TPH-DRO: 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

In accordance with the denial of the *2023 Addendum*, a reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet in areas not reasonably needed for production that were impacted by the release, per 19.15.29.13.D (1) NMAC for the top 4 feet of areas that will be reclaimed following remediation.

ADDITIONAL SOIL SAMPLING ACTIVITIES

In response to the denial of the *2023 Addendum*, 2019 soil analytical results were reviewed to determine areas of the Site with waste-containing soil that were not previously excavated. Excavation sidewall sample SW08 located on the eastern sidewall of the eastern excavation reported a chloride level exceeding the reclamation requirement at 4 feet bgs. At the time of the sample collection, composite sidewall samples were not required so even though the sample was collected at a depth below the application of the reclamation requirement, it is assumed that the sidewall above 4 feet also exceeds the reclamation requirement. Assessment samples BH01A and BH01B were collected at 1 foot and 2 feet bgs, respectively, inside the lined containment east of SW08 to delineate the waste-containing soil. Both samples reported chloride levels below Closure Criteria but exceeding the reclamation requirement of 600 mg/kg in the top four feet of soil. As discussed above and in the *Closure Request*, the eastern excavation could not be extended east to address soil with chloride concentrations exceeding 600 mg/kg as represented by SW08 and BH01 due to safety concerns and to protect the integrity of the production equipment.

On January 6, 2025, sampling location BH01 was resampled using a hand auger to determine if chloride impacts currently exceed the reclamation requirement. The boring was terminated at 2 feet due to refusal, and one soil sample was collected at a depth of approximately 2 feet bgs. The liner was patched

following the sample collection. On February 3, 2025, a core rig was mobilized to the Site to collect additional soil samples from BH01 as well as BH02 and BH03 located south-southeast and north-northwest of BH01, respectively. Discrete samples from all three boreholes were collected at depths of 0.5 feet, 1 foot, 2 feet, 3 feet, and 4 feet bgs. During both 2025 sampling events, soil was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following COC: BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Soil delineation sampling locations from 2025 were mapped utilizing a handheld Global Positioning System (GPS) unit and are illustrated on Figure 2. Boring logs for BH01 through BH03 are attached as Appendix B, and photographic documentation of the 2025 sampling activities is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results from BH01 through BH03 fully define the horizontal extent of waste-containing soil reported from excavation sidewall sample SW08 as requested by NMOCD in the denial response. With the exception of sample SW08, analytical results verify that impacted soil was removed to reclamation requirements in the top 4 feet of soil and remaining COC concentrations are in compliance with Closure Criteria below the top 4 feet. Recent and historical soil sampling results are summarized in Table 1, and laboratory analytical reports are included in Appendix D.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the June 30, 2015, release of produced water. The confirmed depth to groundwater is greater than 100 feet bgs within 0.5 miles of the Site as presented in the *2023 Addendum*. Current analytical results from delineation samples BH01 through BH03 reported COC concentrations in compliance with the Closure Criteria and reclamation requirement indicating natural attenuation remediated impacts previously observed at the Site at BH01. All excavation and delineation samples report COC concentrations below Closure Criteria. No additional remediation is required at the Site at this time.

Following the delineation activities conducted in 2025, the estimated volume of waste-containing soil present beneath the lined operational equipment as defined by sample locations SW08 and BH01 through BH03 is less than 57 cubic yards. As discussed in the *Closure Request*, the excavation immediately adjacent to SW08 vertically delineates chloride concentrations to 600 mg/kg at 10 feet bgs. The presence of waste-containing soil underlying the lined containment does not cause an imminent risk to human health, the environment, or groundwater. XTO will remediate this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria prior to Site reclamation.

Based on the laboratory analytical results for the final excavation and delineation soil samples compliant with the Site Closure Criteria and waste-containing soil delineated to reclamation requirement, XTO respectfully requests no further action for Incident Number nAB1519556419.

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

Sincerely,
Ensolum, LLC

Katherine Kahn, P.G.
Senior Managing Geologist

Tacoma Morrissey
Associate Principal

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

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations (2025)
Table 1	Soil Sample Analytical Results
Appendix A	September 26, 2023 *Closure Request Addendum*
Appendix B	Boring Logs (2025)
Appendix C	Photographic Log (2025)
Appendix D	Laboratory Analytical Results and Chain-of-Custody Documentation (2025)

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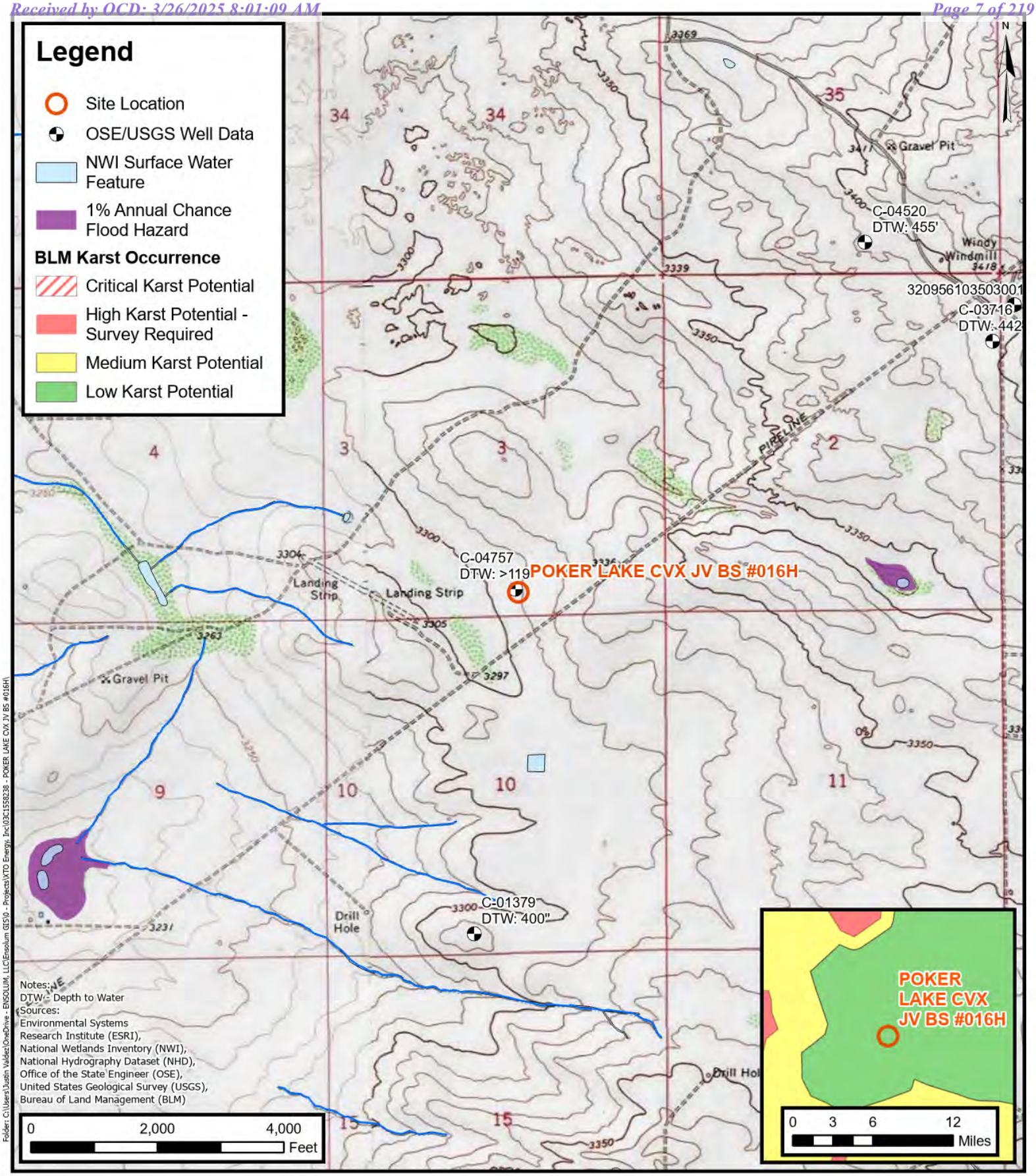
FIGURES



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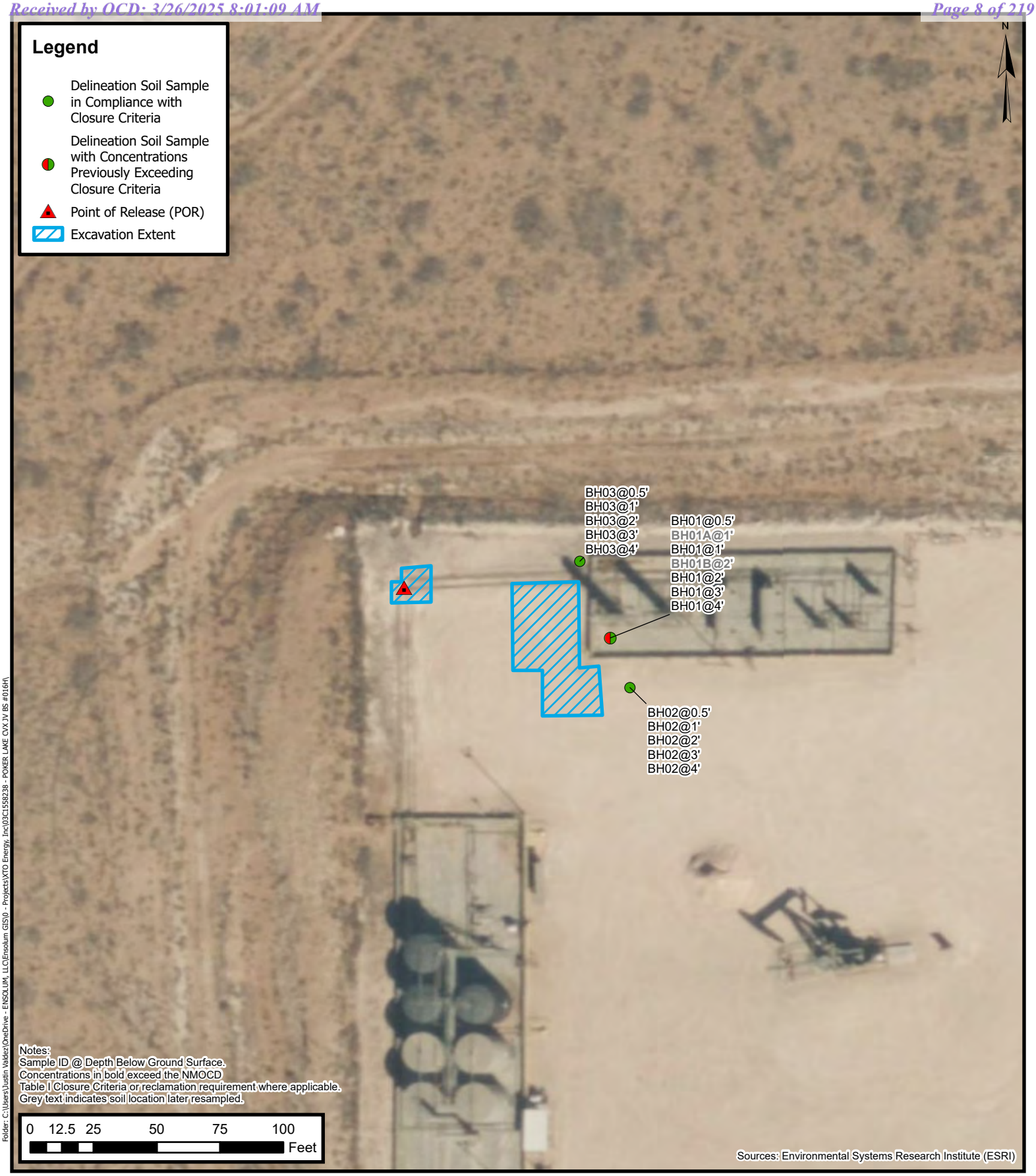
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc
POKER LAKE CVX JV BS #016H
Incident Number: NA
Unit O, Section 03, T 25S, R 30E
Eddy County, New Mexico

FIGURE 1



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Delineation Soil Sample Locations

XTO Energy, Inc
POKER LAKE CVX JV BS #016H
Incident Number: NA
Unit O, Section 03, T 25S, R 30E
Eddy County, New Mexico

FIGURE 2

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
POKER LAKE CVX JV BS #016H
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~~	~~2/13/2018~~	~~0.5~~	~~<0.00200~~	~~<0.00200~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~10,100~~
~~SS02~~	~~2/13/2018~~	~~0.5~~	~~<0.00199~~	~~<0.00199~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~<15.0~~	~~4,270~~
SS03	2/13/2018	0.5	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	85.9
SS04	2/13/2018	0.5	<0.00200	<0.00200	<15.0	19.4	<15.0	19.4	19.4	88.5
~~SS05~~	~~2/13/2018~~	~~0.5~~	~~<0.00202~~	~~<0.00202~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~<14.9~~	~~1,920~~
SS06	5/31/2023	0.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	277
SS07	5/31/2023	0.5	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	63.8
SS08	5/31/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	70.3
SS09	5/31/2023	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	58.9
BH01	2/3/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH01A	7/19/2018	1.0	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	866
BH01	2/3/2025	1.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
BH01B	7/19/2018	2.0	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	16,200
BH01	1/6/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH01	2/3/2025	3.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	288
BH01	2/3/2025	4.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	304
BH02	2/3/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
BH02	2/3/2025	1.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
BH02	2/3/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	112
BH02	2/3/2025	3.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
BH02	2/3/2025	4.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH03	2/3/2025	0.5	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH03	2/3/2025	1.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
BH03	2/3/2025	2.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
BH03	2/3/2025	3.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
BH03	2/3/2025	4.0	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
POKER LAKE CVX JV BS #016H
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**
Excavation Soil Samples										
SW01	07/19/2018	1.0	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	74.0
SW02	07/19/2018	1.0	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SW03	07/19/2018	1.0	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	9.97
SW04	07/19/2018	2.0	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	103
SW05	07/19/2018	2.0	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	189
SW06	07/19/2018	4.0	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	230
SW07	07/19/2018	2.0	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	15.4
SW08	07/19/2018	4.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,290
SW09	07/19/2018	4.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	257
FS01	07/19/2018	2.0	<0.00202	<0.00202	<15.0	91.4	<15.0	91.4	91.4	78.6
FS02	07/19/2018	7.0	<0.00201	<0.00201	<14.9	330	35.3	330	365	407
FS03	07/19/2018	10.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	166
SS05A	07/20/2018	1.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.8
SW10	07/20/2018	1.0	<0.00198	<0.00198	<15.0	56.3	<15.0	56.3	56.3	310
SW11	07/20/2018	1.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	69.9
SW12	07/20/2018	1.0	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	44.4
SW13	07/20/2018	1.0	<0.00201	<0.00201	<14.9	67.9	<14.9	67.9	67.9	267
FS04	07/20/2018	2.0	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	27.7

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 removed during excavation activities

Grey text indicates soil location later resampled

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APPENDIX A

September 26, 2023
Closure Request Addendum

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September 26, 2023

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

Re: Closure Request Addendum
PLU CVX JV BS 016H
Incident Number nAB1519556419
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 February 11, 2019. This addendum provides an update to the depth to groundwater determination activities at the PLU CVX JV BS 016H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the February 11, 2019, *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 nAB1519556419.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit O, Section 3, Township 25 South, Range 30 East, in Eddy County, New Mexico (32.153395°, -103.867621°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On June 30, 2015, corrosion of a steel connection on a flow line resulted in the release of approximately 9 barrels (bbls) of produced water. Approximately 2 bbls of free-standing produced water were recovered using a vacuum truck. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 8, 2015. The release was assigned Remediation Permit (RP) Number 2RP-3103 and Incident Number nAB1519556419.

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.

BACKGROUND

The February 11, 2019, Closure Request detailed site characterization according to 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) were applied:

- 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

Between February 2018 and July 2018, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the June 30, 2015, produced water release. Closure was requested on February 11, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the February 11, 2019 *Closure Request*.

On March 23, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1519556419 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 February 11, 2019, 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 30, 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-04757, was advanced to a depth of 119 feet bgs via air rotary drill rig. The borehole was located approximately 330 feet 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 in the original Closure Request are applicable and appropriate for protection of groundwater at this Site.

ADDITIONAL SOIL SAMPLING ACTIVITIES

Horizontal delineation of a release was not enforced, nor practiced, until it became more frequently required by NMOCD through denial language throughout 2021. Therefore, in order to ensure NMOCD approval of this *Closure Request Addendum*, horizontal delineation activities were completed at the Site. On May 31, 2023, Ensolum personnel collected assessment soil samples SS06 through SS09 from a depth of 0.5 feet bgs around the historical release extent. The assessment soil sample locations are presented on Figure 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Eurofins Laboratories (Eurofins) in Carlsbad, New Mexico, for analysis of the following constituents of concern (COC): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results for assessment samples SS06 through SS09 indicated all COC concentrations were compliant with the most stringent Table I Closure Criteria and confirmed the horizontal extent of the release.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the June 30, 2015, release of produced water. Based on the horizontal delineation activities and confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site as presented in this addendum, and laboratory analytical results for the final excavation and delineation soil samples compliant with the Site Closure Criteria, as documented in the February 11, 2019, *Closure Request*, XTO respectfully requests no further action for Incident Number nAB1519556419. The February 11, 2019, Closure Request is included as Appendix B.

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

Ashley Ager, M.S., PG
Principal

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

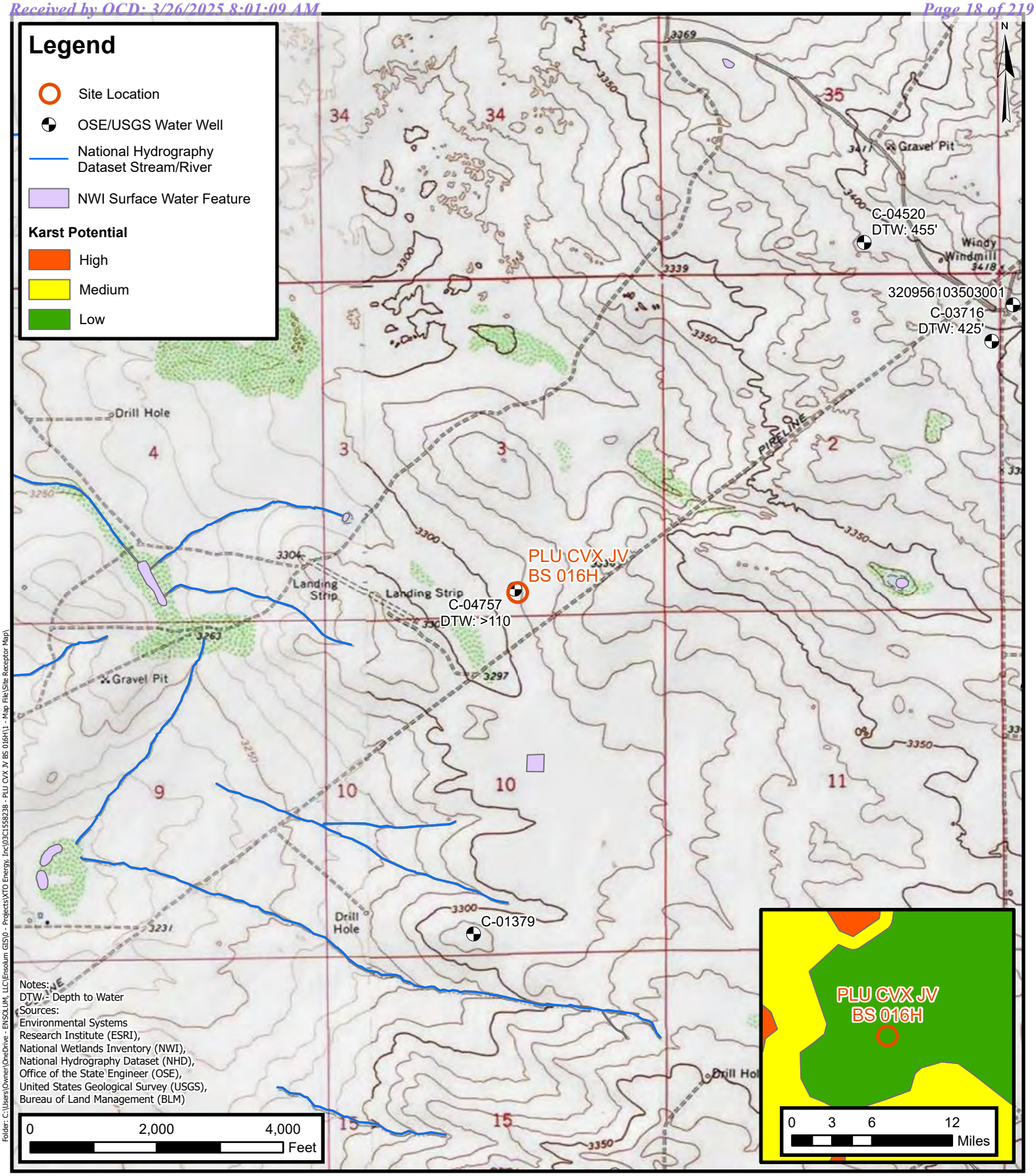
Appendices:

Figure 1	Site Receptor Map
Figure 2	Assessment Soil Sample Locations (2023)
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records

Appendix B Laboratory Analytical Results and Chain-of-Custody Documentation (2023)
Appendix C February 11, 2019 Closure Request

ENSOLUM

FIGURES



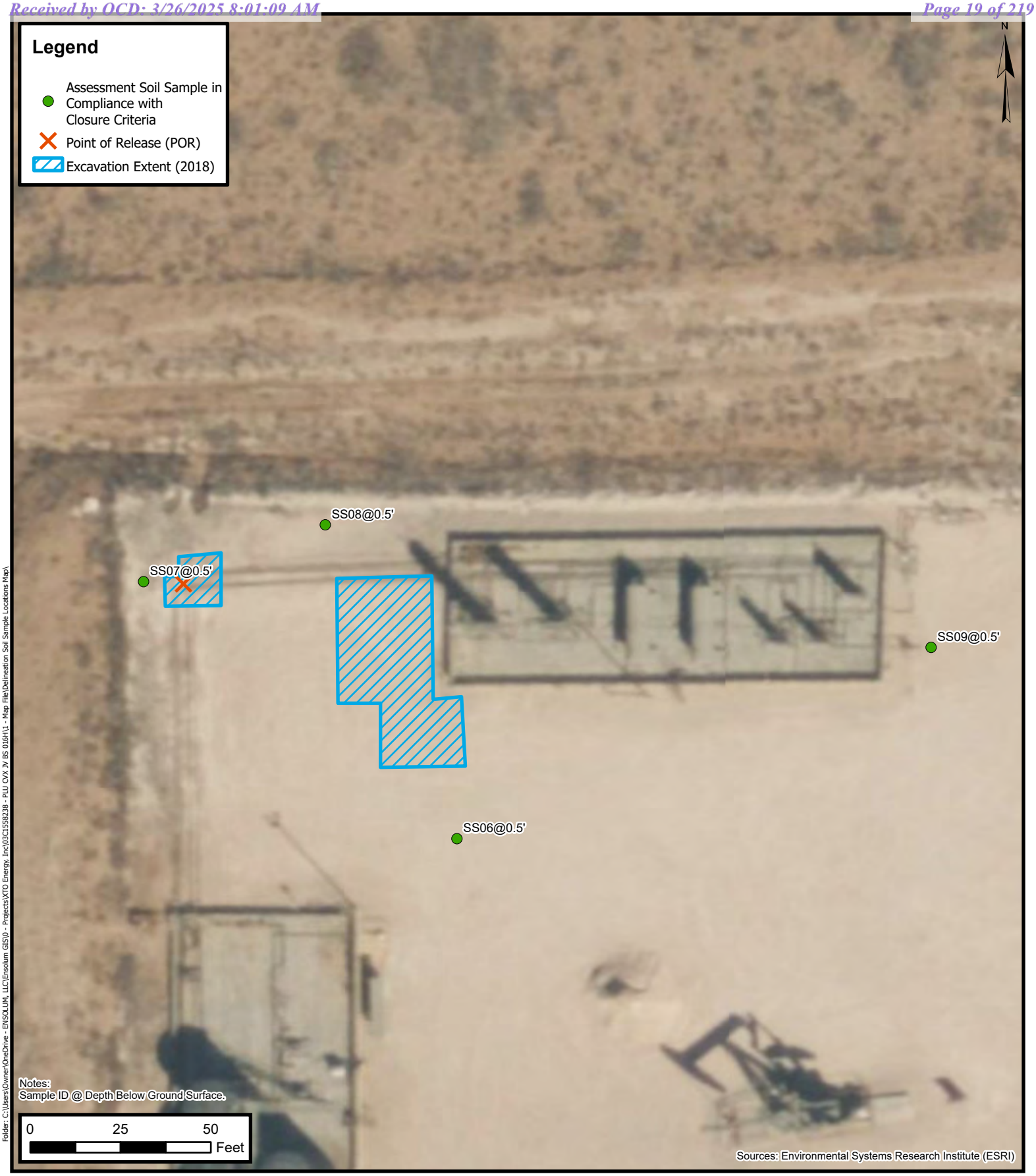
Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558238 - PLU CVX JV BS 016H\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
PLU CVX JV BS 016H
Incident Number: nAB1519556419
Unit O, Section 3, Township 25 South, Range 30 East
Eddy County, New Mexico

FIGURE 1



Folder: C:\Users\Owner\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558238 - PLU CVX JV BS 016H\1 - Map File\Delineation Soil Sample Locations Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Assessment Soil Sample Locations (2023)

XTO Energy, Inc.
PLU CVX JV BS 016H
Incident Number: nAB1519556419
Unit O, Section 3, Township 25 South, Range 30 East
Eddy County, New Mexico

FIGURE 2

ENSOLUM

TABLES

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU CVX JV BS 016H
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										
SS06	05/31/2023	0.5	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	277
SS07	05/31/2023	0.5	<0.00198	<0.00397	<49.8	<49.8	<49.8	<49.8	<49.8	63.8
SS08	05/31/2023	0.5	<0.00201	<0.00402	<49.9	<49.9	<49.9	<49.9	<49.9	70.3
SS09	05/31/2023	0.5	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	58.9

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

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

ENSOLUM

APPENDIX A

Referenced Well Records

ENSOLUM

Sample Name: BH01	Date: 8/2/23
Site Name: PLU CVX JV BS #016H	
Incident Number: NAB1519556419	
Job Number: 03C1558238	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: MR / Method: Air Rotary
Coordinates: 32.152842, -103.866772	Hole Diameter: NA / Total Depth: 119' bgs
Comments: No field screenings.	

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0	CCHE	0'-20' CALICHE GRAVEL, light brown/white, coarse grained, poorly sorted with sub-angular to sub-rounded grains, dry.
						10		
						20	SP	20'-70' SAND with trace caliche, medium brown, medium grained with small grained caliche, poorly sorted, sub-rounded.
						30		Injected water and foaming agent @ 25'.
						40		
						50		
						60		@ 70' bgs, hole collapsed due to sandy conditions. No evidence of water throughout drilling process.
						70	GM	70'-90' GRAVEL conglomerate with sand, small gravel w medium grained sand, grains include quartzite and chert, poorly sorted, sub-angular grains, ~30% sand.
						80		20% sand.
						90	SP	90'-115' SAND, medium brown/orange, medium grained, poorly sorted.
						100		
						110		
						120	SP-SM	115' SAND with silt, red, medium to fine grained, poorly sorted.
						TD		Total Depth @ 119' bgs.

Mike A. Hamman, P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 749148
File Nbr: C 04757

Jul. 21, 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-04757 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: 7/24/2023 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☒ Yes ☐ No

1. APPLICANT(S)

Name: XTO Energy, Inc	Name: Ensolum, LLC
Contact or Agent: check here if Agent ☐ Garrett Green	Contact or Agent: check here if Agent ☒ Benjamin Belill
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 11:28

FOR OSE INTERNAL USE	Application for Permit, Form WR-07, Rev 11/17/16	
File No.: C-04757	Trn. No.: 749148	Receipt No.: 2-45957
Trans Description (optional):		
Sub-Basin: CUB	PCW/LOG Due Date: 7/21/24	

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-04757 POD1	-103.866582	32.152914	Unit O, Sec 3, T25S, R30E, Eddy County

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ Yes ■ No **If yes, how many**_____

Other description relating well to common landmarks, streets, or other:
Located on active well pad facility at the the Poker Lake Unit CVX JV BS #016H (32.152914, -103.866582).

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 11:28

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

File No.: C-04757 POD1	Trn No.: 749148

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 10:35:36 -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 21st day of July 20 23, for the State Engineer,

OSE DII JUL 7 2023

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

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-04757 POD1 | Trn No.: 749148

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.

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 04757 POD1 must be completed and the Well Log filed on or before 07/20/2024.

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 21 day of Jul A.D., 2023

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

By: K. Parekh
KASHYAP PAREKH

Trn Desc: C 04757 POD1 File Number: C 04757
Trn Number: 749148

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-4757-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-4757-POD1

NMOSE File	Casing diameter (inches)	Well depth (feet bgl)	Approximate static water level (feet bgl)	Latitude	Longitude
C-4757-POD1	8.0 (Soil Boring)	110	Unknown	32° 9' 10.49"	103° 51' 59.69''

Specific Plugging Conditions of Approval for Well located in Eddy County, New Mexico.

1. Water well drilling and well drilling activities, including well plugging, are regulated under 19.27.4 NMAC, which requires any person engaged in the business of well drilling within New Mexico to obtain a Well Driller License issued by the New Mexico Office of the State Engineer (NMOSE). Therefore, the firm of a New Mexico licensed Well Driller shall perform the well plugging.

2. Ground Water encountered: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 287.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 110 feet.

3. Dry Hole: The total Theoretical volume of sealant required for abandonment of soil boring well is approximately 26.0 gallons. Total minimum volume of necessary sealant shall be calculated upon sounding the actual pluggable depth of well, which is estimated at 10 feet.

4. Ground Water encountered: Type I/II Portland cement mixed with 5.2 to 6.0 gallons of fresh water per 94-lb sack of cement is approved for the plugging the well.

5. Dry Hole: (a) Drill cuttings up to ten feet of land surface. (b) 10 feet to 0 feet – Hydrated bentonite. The bentonite shall be hydrated separately with its required increments of water prior to being mixed into the cement slurry.

6. Sealant shall be placed by pumping through a tremie pipe extended to near well bottom and kept below top of the slurry column as the well is plugged from bottom-upwards in a manner that displaces

the standing water column upwards from below. Tremie pipe may be pulled as necessary to retain minimal submergence in the advancing column of sealant.

7. Should cement "shrinks-back" occur in the well, use of a tremie for topping off is required for cement placement deeper than 20 feet below land surface or if water is present in the casing. The approved sealant for topping off is identified in condition 3. and 4. of these Specific Conditions of Approval.

8. Any open annulus encountered surrounding the casing shall also be sealed by the placement of the approved sealant. When plugging shallow wells with no construction or environmental concerns, and if the well record on a well to be plugged shows a proper 20-foot annular seal, a plugging plan can propose the use of clean fill material to a nominal 30 feet bgs, then placing an OSE approved sealant to surface. Lacking that information, we would require an excavation of at least 2-feet which shall then be filled in its entirety with sealant to surface.

9. Should the NMED, or another regulatory agency sharing jurisdiction of the project authorize, or by regulation require a more stringent well plugging procedure than herein acknowledged, the more-stringent procedure should be followed. This, in part, includes provisions regarding pre-authorization to proceed, contaminant remediation, inspection, pulling/perforating of casing, or prohibition of free discharge of any fluid from the borehole during or related to the plugging process.

10. NMOSE witnessing of the plugging of the soil boring will not be required.

11. Any deviation from this plan must obtain an approved variance from this office prior to implementation.

12. A Well Plugging Record itemizing actual abandonment process and materials used shall be filed with the State Engineer within 30 days after completion of well plugging. For the plugging record, please resurvey coordinate location for well and note coordinate system for GPS unit. Please attach a copy of these plugging conditions.

The NMOSE Well Plugging Plan of Operations is hereby approved with the aforesaid conditions applied.

Witness my hand and seal this 10th day of July 2023

Mike A. Hamman, P.E. State Engineer

By: K. Parekh

Kashyap Parekh
Water Resources Manager I

2

WELL PLUGGING PLAN OF OPERATIONS

NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging. This form may be used to plug a single well, or if you are plugging multiple monitoring wells on the same site using the same plugging methodology.

Alert! Your well may be eligible to participate in the Aquifer Mapping Program (AMP)-NM Bureau of Geology geoinfo.nmt.edu/resources/water/cgmn/ if within an area of interest and meets the minimum construction requirements, such as there is still water in your well, and the well construction reflected in a well record and log is not compromised, contact AMP at 575-835-5038 or -6951, or by email nmbg-waterlevels@nmt.edu, prior to completing this prior form. Showing proof to the OSE that your well was accepted in this program, may delay the plugging of your well until a later date.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP: ☐ Check here if proposing one plan for multiple monitoring wells on the same site and attaching WD-08m

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: TBD C-4757-POD 1

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, 10.49 sec
Longitude: 103 deg, 51 min, 59.69 sec, NAD 83

OSE DII JUL 7 2023 AM 11:23

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

OSE DII JUL 7 2023 AM 11:23

6) Will the grout be: ____ batch-mixed and delivered to the site

x mixed on site

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 10:34:50 -04'00'

Signature of Applicant Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

OSE DII JUL 7 2023 AM 11:23

X Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this 10th day of July, 2023

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

By: K. Parekh

KASHYAP PAREKH

W.R.M. I

GREAT SEAL OF THE STATE OF NEW MEXICO 1912

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	NA	NA	0
Bottom of proposed interval of grout placement (ft bgl)	NA	NA	110
Theoretical volume of grout required per interval (gallons)	NA	NA	287
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	NA	NA	<6.0
Mixed on-site or batch-mixed and delivered?	NA	NA	onsite
Grout additive 1 requested	NA	NA	NA
Additive 1 percent by dry weight relative to cement	NA	NA	NA
Grout additive 2 requested	NA	NA	NA
Additive 2 percent by dry weight relative to cement	NA	NA	NA

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	NA	NA	0
Bottom of proposed sealant of grout placement (ft bgl)	NA	NA	10
Theoretical volume of sealant required per interval (gallons)	NA	NA	26
Proposed abandonment sealant (manufacturer and trade name)	NA	NA	Bariod Hole Plug

OSE DII JUL 7 2023 AM 11:23

PLU-CVX-JV-BS #016H - Proposed Soil Boring

32.152914, -103.866582
Surface Owner: BLM

Legend

- 0.5 Mile Radius
- PLU-CVX-JV-BS #016H
- Proposed Soil Boring
- XTO Well

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 AM11:23

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 16H
30-015-40581
32.152914, -103.866582
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 1/11 neat cement less than 6.0 gallons of water per 94lb sack. If no water is encountered, then the soil boring will be plugged. The Bureau of Land Management (landowner) authorizes the access of the area to accomplish depth to groundwater determination of this site.

If you have any questions contact Crisha Morgan, at 575-234-5987.

OSE DII JUL 7 2023 AM11:23

Sincerely,

CRISHA MORGAN

Digitally signed by CRISHA MORGAN
Date: 2023.07.03 11:29:01 -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. NMNM105467868

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. PLU-CVX-JV-BS #016H

2. Name of Operator XTO Energy. Inc.

9. API Well No. 30-015-40581

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)*
O-03-25S-30E, Latitude 32.152914, Longitude -103.866582

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 performed 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 determined that the site is ready for final inspection.)

XTO Energy, Inc. (XTO) requests to advance a soil boring to a depth of approximately 110 feet below ground surface for determination of regional groundwater depth. The soil boring will be located at the active XTO well pad listed above (32.152914, -103.866582). The soil boring will be left open for approximately 72 hours, to allow for the slow infill of groundwater. An oil-water interface probe will be utilized to confirm depth to groundwater in the soil boring. Following the 72 hour waiting period, the soil boring will be backfilled following approved New Mexico Office of the State Engineer plugging procedures. A site map and kmz depicting the location of the site and the proposed soil boring location are included with this Form 3160.

OSE DII JUL 7 2023 AM 11:23

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 10:54:55 -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-CVX-JV-BS #016H - Proposed Soil Boring

32.152914, -103.866582
Surface Owner: BLM

Legend

- 0.5 Mile Radius
- PLU-CVX-JV-BS #016H
- Proposed Soil Boring
- XTO Well

ENSOLUM

APPENDIX B

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tacoma Morrissey
Ensolum
601 N. Marienfeld St.
Suite 400
Midland, Texas 79701

Generated 6/5/2023 4:16:18 PM

JOB DESCRIPTION

PLU-CVX-JV-BS #016H
SDG NUMBER 03C1558238

JOB NUMBER

890-4759-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

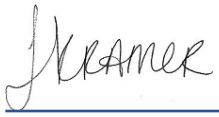
Eurofins Carlsbad

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

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Laboratory Job ID: 890-4759-1
SDG: 03C1558238

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Definitions/Glossary

Client: Ensolum Job ID: 890-4759-1
Project/Site: PLU-CVX-JV-BS #016H SDG: 03C1558238

Qualifiers

GC VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Job ID: 890-4759-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4759-1

Receipt
The samples were received on 5/31/2023 11:52 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC VOA
Method 8021B: LCS was biased low for multiple analytes. However, since the LCSD was acceptable, the data was qualified and reported. (LCS 880-54637/1-A)

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-54637 and analytical batch 880-54640 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCSD) precision was within acceptance limits.

Method 8021B: The continuing calibration verification (CCV) associated with batch 880-54640 recovered above the upper control limit for Benzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The samples with a detection are being re-analyzed for confirmation. The associated samples are impacted: (CCV 880-54640/2), (CCV 880-54640/20) and (CCV 880-54640/33).

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 880-54539 and analytical batch 880-54534 was outside the upper control limits.

Method 8015MOD_NM: The method blank for preparation batch 880-54539 and analytical batch 880-54534 contained Diesel Range Organics (Over C10-C28) and OII Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 880-54539 and analytical batch 880-54534 was outside control limits. Sample non-homogeneity is suspected.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS06

Lab Sample ID: 890-4759-1
Matrix: Solid
Date Collected: 05/31/23 09:45
Date Received: 05/31/23 11:52
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:37	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:37	1
Ethylbenzene	<0.00198	U *-	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:37	1
m-Xylene & p-Xylene	<0.00396	U *-	0.00396		mg/Kg		06/02/23 10:46	06/02/23 20:37	1
o-Xylene	<0.00198	U *-	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:37	1
Xylenes, Total	<0.00396	U *-	0.00396		mg/Kg		06/02/23 10:46	06/02/23 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*	*06/02/23 10:46*	*06/02/23 20:37*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/02/23 10:46*	*06/02/23 20:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			06/05/23 16:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/02/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 18:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 18:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*107*		*70 - 130*	*06/01/23 16:30*	*06/01/23 18:41*	*1*
o-Terphenyl	*121*		*70 - 130*	*06/01/23 16:30*	*06/01/23 18:41*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**277**		4.96		mg/Kg			06/02/23 13:41	1

Client Sample ID: SS07

Lab Sample ID: 890-4759-2
Matrix: Solid
Date Collected: 05/31/23 09:50
Date Received: 05/31/23 11:52
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:57	1
Toluene	<0.00198	U	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:57	1
Ethylbenzene	<0.00198	U *-	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:57	1
m-Xylene & p-Xylene	<0.00397	U *-	0.00397		mg/Kg		06/02/23 10:46	06/02/23 20:57	1
o-Xylene	<0.00198	U *-	0.00198		mg/Kg		06/02/23 10:46	06/02/23 20:57	1
Xylenes, Total	<0.00397	U *-	0.00397		mg/Kg		06/02/23 10:46	06/02/23 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*06/02/23 10:46*	*06/02/23 20:57*	*1*

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Client Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS07

Lab Sample ID: 890-4759-2
Matrix: Solid
Date Collected: 05/31/23 09:50
Date Received: 05/31/23 11:52
Sample Depth: 0.5

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Difluorobenzene (Surr)	*88*		*70 - 130*	*06/02/23 10:46*	*06/02/23 20:57*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397	mg/Kg			06/05/23 16:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8	mg/Kg			06/02/23 09:50	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8	mg/Kg		06/01/23 16:30	06/01/23 19:03	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8	mg/Kg		06/01/23 16:30	06/01/23 19:03	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8	mg/Kg		06/01/23 16:30	06/01/23 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	*101*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:03*	*1*
o-Terphenyl	*116*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:03*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**63.8**		5.00	mg/Kg			06/02/23 13:46	1

Client Sample ID: SS08

Lab Sample ID: 890-4759-3
Matrix: Solid
Date Collected: 05/31/23 09:55
Date Received: 05/31/23 11:52
Sample Depth: 0.5

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201	mg/Kg		06/02/23 10:46	06/02/23 21:18	1
Toluene	<0.00201	U	0.00201	mg/Kg		06/02/23 10:46	06/02/23 21:18	1
Ethylbenzene	<0.00201	U *-	0.00201	mg/Kg		06/02/23 10:46	06/02/23 21:18	1
m-Xylene & p-Xylene	<0.00402	U *-	0.00402	mg/Kg		06/02/23 10:46	06/02/23 21:18	1
o-Xylene	<0.00201	U *-	0.00201	mg/Kg		06/02/23 10:46	06/02/23 21:18	1
Xylenes, Total	<0.00402	U *-	0.00402	mg/Kg		06/02/23 10:46	06/02/23 21:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*06/02/23 10:46*	*06/02/23 21:18*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*	*06/02/23 10:46*	*06/02/23 21:18*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402	mg/Kg			06/05/23 16:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9	mg/Kg			06/02/23 09:50	1

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Client Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS08

Date Collected: 05/31/23 09:55
Date Received: 05/31/23 11:52
Sample Depth: 0.5

Lab Sample ID: 890-4759-3

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		06/01/23 16:30	06/01/23 19:25	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/01/23 16:30	06/01/23 19:25	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/01/23 16:30	06/01/23 19:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:25*	*1*
o-Terphenyl	*109*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:25*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.3**		5.04		mg/Kg			06/02/23 13:52	1

Client Sample ID: SS09

Date Collected: 05/31/23 10:00
Date Received: 05/31/23 11:52
Sample Depth: 0.5

Lab Sample ID: 890-4759-4

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		06/02/23 10:46	06/02/23 21:38	1
Toluene	<0.00202	U	0.00202		mg/Kg		06/02/23 10:46	06/02/23 21:38	1
Ethylbenzene	<0.00202	U *-	0.00202		mg/Kg		06/02/23 10:46	06/02/23 21:38	1
m-Xylene & p-Xylene	<0.00404	U *-	0.00404		mg/Kg		06/02/23 10:46	06/02/23 21:38	1
o-Xylene	<0.00202	U *-	0.00202		mg/Kg		06/02/23 10:46	06/02/23 21:38	1
Xylenes, Total	<0.00404	U *-	0.00404		mg/Kg		06/02/23 10:46	06/02/23 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*	*06/02/23 10:46*	*06/02/23 21:38*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/02/23 10:46*	*06/02/23 21:38*	*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			06/05/23 16:54	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			06/02/23 09:50	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 19:47	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 19:47	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/01/23 16:30	06/01/23 19:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*111*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:47*	*1*
o-Terphenyl	*122*		*70 - 130*	*06/01/23 16:30*	*06/01/23 19:47*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS09
Date Collected: 05/31/23 10:00
Date Received: 05/31/23 11:52
Sample Depth: 0.5

Lab Sample ID: 890-4759-4
Matrix: Solid

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.9		5.05		mg/Kg			06/02/23 13:57	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-29021-A-1-C MS	Matrix Spike	101	102
880-29021-A-1-D MSD	Matrix Spike Duplicate	85	109
890-4759-1	SS06	86	96
890-4759-2	SS07	84	88
890-4759-3	SS08	100	99
890-4759-4	SS09	95	96
LCS 880-54637/1-A	Lab Control Sample	77	103
LCSD 880-54637/2-A	Lab Control Sample Dup	86	97
MB 880-54637/5-A	Method Blank	82	112

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)
880-28961-A-1-F MS	Matrix Spike	119	125
880-28961-A-1-G MSD	Matrix Spike Duplicate	105	111
890-4759-1	SS06	107	121
890-4759-2	SS07	101	116
890-4759-3	SS08	97	109
890-4759-4	SS09	111	122
LCS 880-54539/2-A	Lab Control Sample	90	104
LCSD 880-54539/3-A	Lab Control Sample Dup	92	104
MB 880-54539/1-A	Method Blank	119	136 S1+

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-54637/5-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54637

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/02/23 10:46	06/02/23 15:14	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/02/23 10:46	06/02/23 15:14	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/02/23 10:46	06/02/23 15:14	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/02/23 10:46	06/02/23 15:14	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/02/23 10:46	06/02/23 15:14	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/02/23 10:46	06/02/23 15:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*70 - 130*	*06/02/23 10:46*	*06/02/23 15:14*	*1*
1,4-Difluorobenzene (Surr)	*112*		*70 - 130*	*06/02/23 10:46*	*06/02/23 15:14*	*1*

Lab Sample ID: LCS 880-54637/1-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54637

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.08076		mg/Kg		81	70 - 130		
Toluene			0.100	0.07888		mg/Kg		79	70 - 130		
Ethylbenzene			0.100	0.06278	*-	mg/Kg		63	70 - 130		
m-Xylene & p-Xylene			0.200	0.1297	*-	mg/Kg		65	70 - 130		
o-Xylene			0.100	0.06057	*-	mg/Kg		61	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*77*		*70 - 130*
1,4-Difluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 880-54637/2-A
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54637

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.08249		mg/Kg		82	70 - 130	2	35
Toluene			0.100	0.08605		mg/Kg		86	70 - 130	9	35
Ethylbenzene			0.100	0.07090		mg/Kg		71	70 - 130	12	35
m-Xylene & p-Xylene			0.200	0.1512		mg/Kg		76	70 - 130	15	35
o-Xylene			0.100	0.07103		mg/Kg		71	70 - 130	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*
1,4-Difluorobenzene (Surr)	*97*		*70 - 130*

Lab Sample ID: 880-29021-A-1-C MS
Matrix: Solid
Analysis Batch: 54640

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54637

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.101	0.1091		mg/Kg		108	70 - 130		
Toluene	0.00298		0.101	0.09866		mg/Kg		95	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

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

Lab Sample ID: 880-29021-A-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54640 — **Prep Batch: 54637**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	0.00667	*- F1	0.101	0.08172		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	0.0294	*- F1	0.202	0.1753		mg/Kg		72	70 - 130
o-Xylene	0.0140	*- F1	0.101	0.08321	F1	mg/Kg		69	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 880-29021-A-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54640 — **Prep Batch: 54637**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0996	0.1044		mg/Kg		105	70 - 130	4	35
Toluene	0.00298		0.0996	0.08605		mg/Kg		83	70 - 130	14	35
Ethylbenzene	0.00667	*- F1	0.0996	0.06152	F1	mg/Kg		55	70 - 130	28	35
m-Xylene & p-Xylene	0.0294	*- F1	0.199	0.1293	F1	mg/Kg		50	70 - 130	30	35
o-Xylene	0.0140	*- F1	0.0996	0.06047	F1	mg/Kg		47	70 - 130	32	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*
1,4-Difluorobenzene (Surr)	*109*		*70 - 130*

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

Lab Sample ID: MB 880-54539/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54534 — **Prep Batch: 54539**

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		06/01/23 07:59	06/01/23 08:40	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/01/23 07:59	06/01/23 08:40	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/01/23 07:59	06/01/23 08:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*119*		*70 - 130*	*06/01/23 07:59*	*06/01/23 08:40*	*1*
o-Terphenyl	*136*	*S1+*	*70 - 130*	*06/01/23 07:59*	*06/01/23 08:40*	*1*

Lab Sample ID: LCS 880-54539/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 54534 — **Prep Batch: 54539**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1220		mg/Kg		122	70 - 130
Diesel Range Organics (Over C10-C28)	1000	964.2		mg/Kg		96	70 - 130

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QC Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

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

Lab Sample ID: LCS 880-54539/2-A
Matrix: Solid
Analysis Batch: 54534

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54539

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctane	*90*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: LCSD 880-54539/3-A
Matrix: Solid
Analysis Batch: 54534

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54539

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	1113		mg/Kg		111	70 - 130	9	20
Diesel Range Organics (Over C10-C28)			1000	830.6		mg/Kg		83	70 - 130	15	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctane	*92*		*70 - 130*
o-Terphenyl	*104*		*70 - 130*

Lab Sample ID: 880-28961-A-1-F MS
Matrix: Solid
Analysis Batch: 54534

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54539

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 F2	1000	1224		mg/Kg		119	70 - 130
Diesel Range Organics (Over C10-C28)	76.7		1000	1132		mg/Kg		106	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctane	*119*		*70 - 130*
o-Terphenyl	*125*		*70 - 130*

Lab Sample ID: 880-28961-A-1-G MSD
Matrix: Solid
Analysis Batch: 54534

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54539

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 F2	999	952.7	F2	mg/Kg		92	70 - 130	25	20
Diesel Range Organics (Over C10-C28)	76.7		999	996.8		mg/Kg		92	70 - 130	13	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctane	*105*		*70 - 130*
o-Terphenyl	*111*		*70 - 130*

QC Sample Results

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-54520/1-A
Matrix: Solid
Analysis Batch: 54607

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			06/02/23 10:16	1

Lab Sample ID: LCS 880-54520/2-A
Matrix: Solid
Analysis Batch: 54607

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	238.7		mg/Kg		95	90 - 110		

Lab Sample ID: LCSD 880-54520/3-A
Matrix: Solid
Analysis Batch: 54607

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	239.8		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4758-A-1-B MS
Matrix: Solid
Analysis Batch: 54607

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	66.7		249	307.0		mg/Kg		96	90 - 110		

Lab Sample ID: 890-4758-A-1-C MSD
Matrix: Solid
Analysis Batch: 54607

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	66.7		249	307.6		mg/Kg		97	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

GC VOA

Prep Batch: 54637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	5035	
890-4759-2	SS07	Total/NA	Solid	5035	
890-4759-3	SS08	Total/NA	Solid	5035	
890-4759-4	SS09	Total/NA	Solid	5035	
MB 880-54637/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-54637/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-54637/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29021-A-1-C MS	Matrix Spike	Total/NA	Solid	5035	
880-29021-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 54640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	8021B	54637
890-4759-2	SS07	Total/NA	Solid	8021B	54637
890-4759-3	SS08	Total/NA	Solid	8021B	54637
890-4759-4	SS09	Total/NA	Solid	8021B	54637
MB 880-54637/5-A	Method Blank	Total/NA	Solid	8021B	54637
LCS 880-54637/1-A	Lab Control Sample	Total/NA	Solid	8021B	54637
LCSD 880-54637/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	54637
880-29021-A-1-C MS	Matrix Spike	Total/NA	Solid	8021B	54637
880-29021-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	54637

Analysis Batch: 54812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	Total BTEX	
890-4759-2	SS07	Total/NA	Solid	Total BTEX	
890-4759-3	SS08	Total/NA	Solid	Total BTEX	
890-4759-4	SS09	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 54534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	8015B NM	54539
890-4759-2	SS07	Total/NA	Solid	8015B NM	54539
890-4759-3	SS08	Total/NA	Solid	8015B NM	54539
890-4759-4	SS09	Total/NA	Solid	8015B NM	54539
MB 880-54539/1-A	Method Blank	Total/NA	Solid	8015B NM	54539
LCS 880-54539/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	54539
LCSD 880-54539/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	54539
880-28961-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	54539
880-28961-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	54539

Prep Batch: 54539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	8015NM Prep	
890-4759-2	SS07	Total/NA	Solid	8015NM Prep	
890-4759-3	SS08	Total/NA	Solid	8015NM Prep	
890-4759-4	SS09	Total/NA	Solid	8015NM Prep	
MB 880-54539/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-54539/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

QC Association Summary

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

GC Semi VOA (Continued)

Prep Batch: 54539 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-54539/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-28961-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-28961-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 54633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Total/NA	Solid	8015 NM	
890-4759-2	SS07	Total/NA	Solid	8015 NM	
890-4759-3	SS08	Total/NA	Solid	8015 NM	
890-4759-4	SS09	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 54520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Soluble	Solid	DI Leach	
890-4759-2	SS07	Soluble	Solid	DI Leach	
890-4759-3	SS08	Soluble	Solid	DI Leach	
890-4759-4	SS09	Soluble	Solid	DI Leach	
MB 880-54520/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4758-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4758-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 54607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4759-1	SS06	Soluble	Solid	300.0	54520
890-4759-2	SS07	Soluble	Solid	300.0	54520
890-4759-3	SS08	Soluble	Solid	300.0	54520
890-4759-4	SS09	Soluble	Solid	300.0	54520
MB 880-54520/1-A	Method Blank	Soluble	Solid	300.0	54520
LCS 880-54520/2-A	Lab Control Sample	Soluble	Solid	300.0	54520
LCSD 880-54520/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	54520
890-4758-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	54520
890-4758-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	54520

Lab Chronicle

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS06

Lab Sample ID: 890-4759-1
Matrix: Solid
Date Collected: 05/31/23 09:45
Date Received: 05/31/23 11:52

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	54637	06/02/23 10:46	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/02/23 20:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54812	06/05/23 16:54	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54633	06/02/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54539	06/01/23 16:30	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54534	06/01/23 18:41	SM	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 13:41	CH	EET MID

Client Sample ID: SS07

Lab Sample ID: 890-4759-2
Matrix: Solid
Date Collected: 05/31/23 09:50
Date Received: 05/31/23 11:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	54637	06/02/23 10:46	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/02/23 20:57	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54812	06/05/23 16:54	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54633	06/02/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	54539	06/01/23 16:30	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54534	06/01/23 19:03	SM	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 13:46	CH	EET MID

Client Sample ID: SS08

Lab Sample ID: 890-4759-3
Matrix: Solid
Date Collected: 05/31/23 09:55
Date Received: 05/31/23 11:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	54637	06/02/23 10:46	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/02/23 21:18	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54812	06/05/23 16:54	AJ	EET MID
Total/NA	Analysis	8015 NM		1			54633	06/02/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	54539	06/01/23 16:30	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54534	06/01/23 19:25	SM	EET MID
Soluble	Leach	DI Leach			4.96 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 13:52	CH	EET MID

Client Sample ID: SS09

Lab Sample ID: 890-4759-4
Matrix: Solid
Date Collected: 05/31/23 10:00
Date Received: 05/31/23 11:52

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	54637	06/02/23 10:46	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	54640	06/02/23 21:38	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			54812	06/05/23 16:54	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Client Sample ID: SS09

Date Collected: 05/31/23 10:00
Date Received: 05/31/23 11:52

Lab Sample ID: 890-4759-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			54633	06/02/23 09:50	SM	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	54539	06/01/23 16:30	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	54534	06/01/23 19:47	SM	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	54520	05/31/23 15:16	KS	EET MID
Soluble	Analysis	300.0		1	50 mL	50 mL	54607	06/02/23 13:57	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-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Laboratory: Eurofins Midland

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

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

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

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

Method Summary

Client: Ensolum
Project/Site: PLU-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

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-CVX-JV-BS #016H

Job ID: 890-4759-1
SDG: 03C1558238

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4759-1	SS06	Solid	05/31/23 09:45	05/31/23 11:52	0.5
890-4759-2	SS07	Solid	05/31/23 09:50	05/31/23 11:52	0.5
890-4759-3	SS08	Solid	05/31/23 09:55	05/31/23 11:52	0.5
890-4759-4	SS09	Solid	05/31/23 10:00	05/31/23 11:52	0.5

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Chain of Custody

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

Work Order No: _____

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Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum, 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:	(337) 257-8307	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-CVX-JV-BS #016H	Turn Around	
Project Number:	03C1558238	☒ Routine ☐ Rush	
Project Location:	32.1533955, -103.8107621	Due Date:	5 days
Sampler's Name:	Mariaha 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:	IR007
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

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	TPH	BTEX	Chlorides	Sample Comments
SS06	S	05/31/23	9:45	0.5'	G	1		X	X	X	Incident #:
SS07	↓	↓	9:50	0.5'	↓	↓					nAB1519556419
SS08			9:55	0.5'							
SS09			10:00	0.5'							Cost center: 1140131001
											API: 30-015-40561
											tmorrissey@ensolum.com

890-4759 Chain of Custody

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5.31.23 1158	2		
3			4		
5			6		

Revised Date: 08/25/2020 Rev. 2020.2

Eurofins Carlsbad
1089 N Canal St
Carlsbad NM 88220
Phone 575-988-3199 Fax 575-988-3199

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler	Lab PM: Kramer Jessica	Carrier Tracking No(s)	COC No: 890-1305 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Jessica Kramer@et.eurofinsus com	State of Origin: New Mexico	Page: Page 1 of 1
Company: Eurofins Environment Testing South Centr		Accreditations Required (See note): NELAP - Texas		Job #: 890-4759-1
Address: 1211 W Florida Ave	Due Date Requested: 6/6/2023			
City: Midland	TAT Requested (days):			
State, Zip: TX 79701				
Phone: 432-704-5440(Tel)	PO #:			
Email	WO #:			
Project Name: PLU-CVX-JV-BS #016H	Project #: 89000093			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B NaOH, C Zn Acetate, D Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I - Ice, J DI Water, K EDTA, L EDA, M Hexane, N None, O AsNaO2, P Na2O4S, Q Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V MCAA, W pH 4-5, Y Trizma, Z other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015MOD_NM/8015NM_S_Prep (MOD) Full TPH	8015MOD_Calc	300_ORGFM_28D/DI_LEACH Chloride	8021B/5035FP_Calc (MOD) BTEX	Total_BTEX_GCV	Total Number of containers	Special Instructions/Note
			Preservation Code:										
SS06 (890-4759-1)	5/31/23	09 45 Mountain		Solid			X	X	X	X	X	1	
SS07 (890-4759-2)	5/31/23	09 50 Mountain		Solid			X	X	X	X	X	1	
SS08 (890-4759-3)	5/31/23	09 55 Mountain		Solid			X	X	X	X	X	1	
SS09 (890-4759-4)	5/31/23	10 00 Mountain		Solid			X	X	X	X	X	1	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing South Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing South Central LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing South Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing South Central LLC.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III IV Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time.	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4759-1
SDG Number: 03C1558238

Login Number: 4759
List Number: 1
Creator: Clifton, Cloe

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4759-1
SDG Number: 03C1558238

Login Number: 4759
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/01/23 11:50 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	

Projects Environmental Specialist - A
505-635-5000
Ashley.Maxwell@emnrd.nm.gov

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

ENSOLUM

APPENDIX C

February 11, 2019 Closure Request

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

February 11, 2019

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Dr, #3
Santa Fe, New Mexico 87505

RE: Closure Request
XTO Energy, Inc.
PLU CVX JV BS 016H
Remediation Permit Number 2RP-3103
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing excavation of impacted soil and confirmation soil sampling activities at the PLU CVX JV BS 016H (Site) located in Unit O, Section 3, Township 25 South, Range 30 East, in Eddy, New Mexico (Figure 1). The purpose of the excavation and confirmation soil sampling activities were to asses impacts to soil after a release of produced water resulted from corrosion of a steel connection on a flow line.

On June 30, 2015, XTO discovered a release of produced water from a hole in the produced water line connecting the heater treater to the produced water tank. Approximately 9 barrels (bbls) of produced water were released. Approximately 2 bbls of free-standing liquids were recovered using a vacuum truck. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on July 8, 2015, and was assigned Remediation Permit (RP) Number 2RP-3103 (Attachment 1). Based on the initial response efforts and the results of the confirmation sampling event conducted after impacted soil was removed, XTO is requesting no further action for this release.

The release is 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 is to ensure 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) dated August 14, 2018. The release is categorized as a Tier II site in the Compliance Agreement, meaning remediation of the release began prior to August 14, 2018, the effective date of 19.15.29 NMAC, however the closure report is still pending. Based on the results of the soil sampling events conducted after impacted soil was removed, XTO is submitting this closure report and requesting no further action for this release.

BACKGROUND

According to Section 12 of 19.15.29 NMAC, LTE applied Table 1, the *Closure Criteria for Soils Impacted by a Release*. 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. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320856103502801 25S.30E.12.113211, located approximately 1.56 miles east of the Site, with a depth to groundwater of 390.08 feet and a total depth of 482 feet. The water well is approximately 53 feet higher in elevation than the Site. The closest surface water to the Site is an unnamed dry wash located approximately 0.52 miles northeast of the Site. Well water data for USGS 320856103502801 25S.30E.12.113211 was last updated in 1998. Elevation of this well is 3,370 feet and is 53 feet higher than the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. Based on these criteria, the following NMOCD Table 1 closure criteria apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 2,500 mg/kg total petroleum hydrocarbons (TPH); 1,000 mg/kg TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO); and 20,000 mg/kg chloride.

Soil samples were collected prior to the update to 19.15.29 NMAC and the Compliance Agreement, which affected the remediation action level for chloride. At the time of soil removal activities, XTO applied a 600 mg/kg standard for chloride, which was regularly enforced prior to August 14, 2018. Under the Compliance Agreement, all Tier II sites are subject to the NMOCD Table 1 Closure Criteria in 19.15.29 NMAC. The remediation activities documented herein were guided by the 600 mg/kg standard; however, final closure of the Site is requested based on application of the new chloride standard specified in NMOCD Table 1 Closure Criteria.

SOIL SAMPLING

On February 13, 2018, an LTE scientist collected five preliminary soil samples (SS01 through SS05) to assess the lateral extent of soil impacts. The soil sample locations were selected based on information provided in the initial Form C-141 and field observations (Figures 2). No visible staining or hydrocarbon odor was observed in the soil samples. To eliminate the effects from weathering and natural degradation of contaminates at the ground surface, the soil samples were collected from each sample location at approximately 0.5 feet bgs.

The soil samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp. 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 for the five soil samples indicated that BTEX and total TPH concentrations were compliant with the NMOCD Table 1 Closure Critera; however, results for soil samples SS01, SS02, and SS05 contained chloride concentrations of 10,100 mg/kg, 4,270 mg/kg, and 1,920 mg/kg, respectively, that exceeded the NMOCD remediation action level at the time of sampling of 600 mg/kg. Laboratory analytical results are depicted on Figure 2, summarized in Table 1, and the complete laboratory analytical report is included as Attachment 2.

EXCAVATION ACTIVITIES

On July 19 and 20, 2018, LTE personnel initiated two excavations of impacted soil as indicated by field screening and laboratory analytical results exceeding the 600 mg/kg chloride in preliminary soil samples SS01, SS02, and SS05. To delineate chloride impacts to soil and to direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips.

Because the excavation was completed prior to implementation of 19.15.29 NMAC and the Compliance Agreement, excavation confirmation samples were collected as discrete samples instead of composite samples. Because the area of impacted soil could be visually discerned, and the location of the release was well documented, LTE applied a judgmental sampling protocol, selecting sample locations based on visual observation to represent the floor and sidewalls of the excavation. The sampling protocol complied with *Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan*, EPA QA/G-5S, December 2002. The soil samples were collected, handled, and analyzed as described above and submitted to Xenco.

Impacted soil was removed to a depth ranging from 1 foot to 2 feet bgs from the western excavation in the location of the original reported release and near soil sample SS05. LTE collected six confirmation soil samples (SS05A, SW10 through SW13, and FS04) from the western excavation. The locations of the confirmation soil samples are illustrated on Figure 3.

Impacted soil was removed to a depth ranging from 7 feet to 10 feet bgs from the eastern excavation near the lined containment of the heater treater and near preliminary soil samples SS01 and SS02. LTE collected twelve confirmation soil samples (SW01 through SW09 and FS01 through FS03) from the eastern excavation. The locations of the confirmation soil samples are illustrated on Figure 3.

The western excavation footprint measured approximately 100 square feet in area with the depth ranging from approximately 1 foot to 2 feet bgs throughout the excavation, and the eastern excavation footprint measured approximately 1,140 square feet in area with the depth

ranging from 7 foot to 10 feet throughout the excavation. The horizontal extents of the excavations are illustrated on Figure 3. Approximately 320 cubic yards of impacted soil were removed using a mini-excavator, loader, dump truck, and hydro-vacuum and hand digging within 2 feet of exposed underground lines or production equipment due to the safety policy enforced by XTO to protect production equipment integrity. Impacted soil was transported and properly disposed of at the Lea Land Landfill Halfway Facility, in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the western excavation indicated preliminary soil sample SS05 exceeded 600 mg/kg chloride. The soil around preliminary soil sample SS05 was excavated and laboratory analytical results for confirmation soil samples SW5A, SW10 through SW13, and FS04 indicated that the chloride concentrations exceeding 600 mg/kg had been removed.

Laboratory analytical results for the eastern excavation indicated preliminary soil samples SS01 and SS02 exceeded 600 mg/kg chloride. The soil around preliminary soil samples SS01 and SS02 was excavated, and laboratory analytical results for confirmation soil samples SW01 through SW07, SW09, and FS01 through FS03 indicated that the chloride concentrations exceeding 600 mg/kg had been removed. Laboratory analytical results for excavation sidewall sample SW08 exceeded 600 mg/kg. Laboratory analytical results are presented on Figure 3, summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2. A photographic log of the excavation is included as Attachment 3.

ADDITIONAL SUBSURFACE INVESTIGATION

On July 19, 2018, one soil boring was advanced in the lined containment area adjacent to the east

ern excavation to delineate chloride concentrations exceeding 600 mg/kg east of soil sample SW08. Soil boring BH01 was advanced to a total depth of 2 feet bgs where auger refusal was encountered. Two soil samples (BH01A@1' and BH01B@2') were collected from the 1-foot and 2-foot sample intervals, respectively, and field screened using a PID and Hach® chloride QuanTab® test strips. The soil samples were collected, handled, and analyzed as described above, and submitted to Xenco. A soil sampling log is included as Attachment 4.

Laboratory analytical results for soil boring samples BH01A and BH01B indicated that the chloride concentrations exceeded 600 mg/kg. Due to the proximity of the impacted soil and the production equipment, the eastern excavation could not be advanced to address soil with chloride concentrations exceeding 600 mg/kg as represented by SW08 and BH01 due to safety concerns and to protect the integrity of the production equipment. XTO's safety policy restricts soil disturbing activities to a 2-foot radius of any on site storage tanks or process equipment. This safety policy is established to protect workers and to reduce the likelihood of compromising the foundation of the process equipment and storage tanks. This policy was enforced along the eastern sidewall of the excavation where impacted soil was observed within two feet of the process equipment. The excavation was advanced to two feet from the process equipment by mechanical and hand digging methods to remove as much impacted soil as possible.

Re-evaluation of the chloride concentrations under the remediation action levels specified in Table 1 Closure Criteria of 19.15.29 NMAC indicate the soil is compliant with the 20,000 mg/kg remediation action level. Although hand auger refusal was encountered at BH01, the excavation immediately adjacent to BH01 vertically delineates chloride concentrations to 600 mg/kg at 10 feet bgs. Laboratory analytical results are presented on Figure 3, summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Impacted soil was excavated in two locations. The western excavation was located near the original source area, and the eastern excavation was located near the heater treaters. 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 Table 1 Closure Criteria. Soil with chloride concentrations exceeding 600 mg/kg was delineated vertically to approximately 10 feet bgs.

Based on this information, XTO requests no further action for release number 2RP-3103. Upon approval of this request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the excavation area is included as Attachment 3.

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
Jim Amos, BLM
Deborah McKinney, BLM

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Final Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3103)
Attachment 2	Laboratory Analytical Reports
Attachment 3	Photographic Log
Attachment 4	Soil Sampling Log

FIGURES

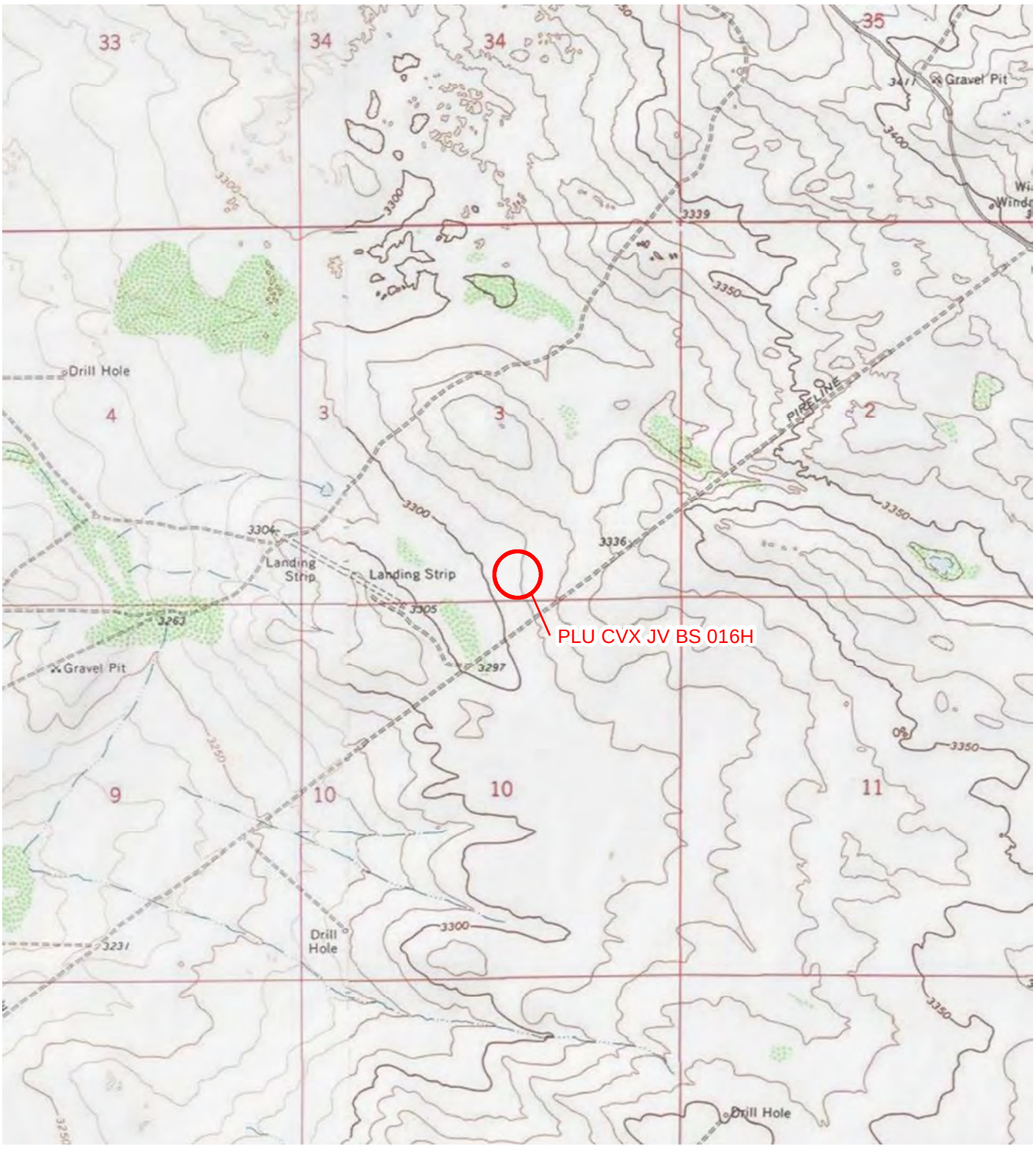

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3103

FIGURE 1
SITE LOCATION MAP
PLU CVX JV BS 016H
UNIT O SEC 3 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918048_PLU CVX JV BS #016H\012918048_FIG01_SL_2018_2RP-3103.mxd

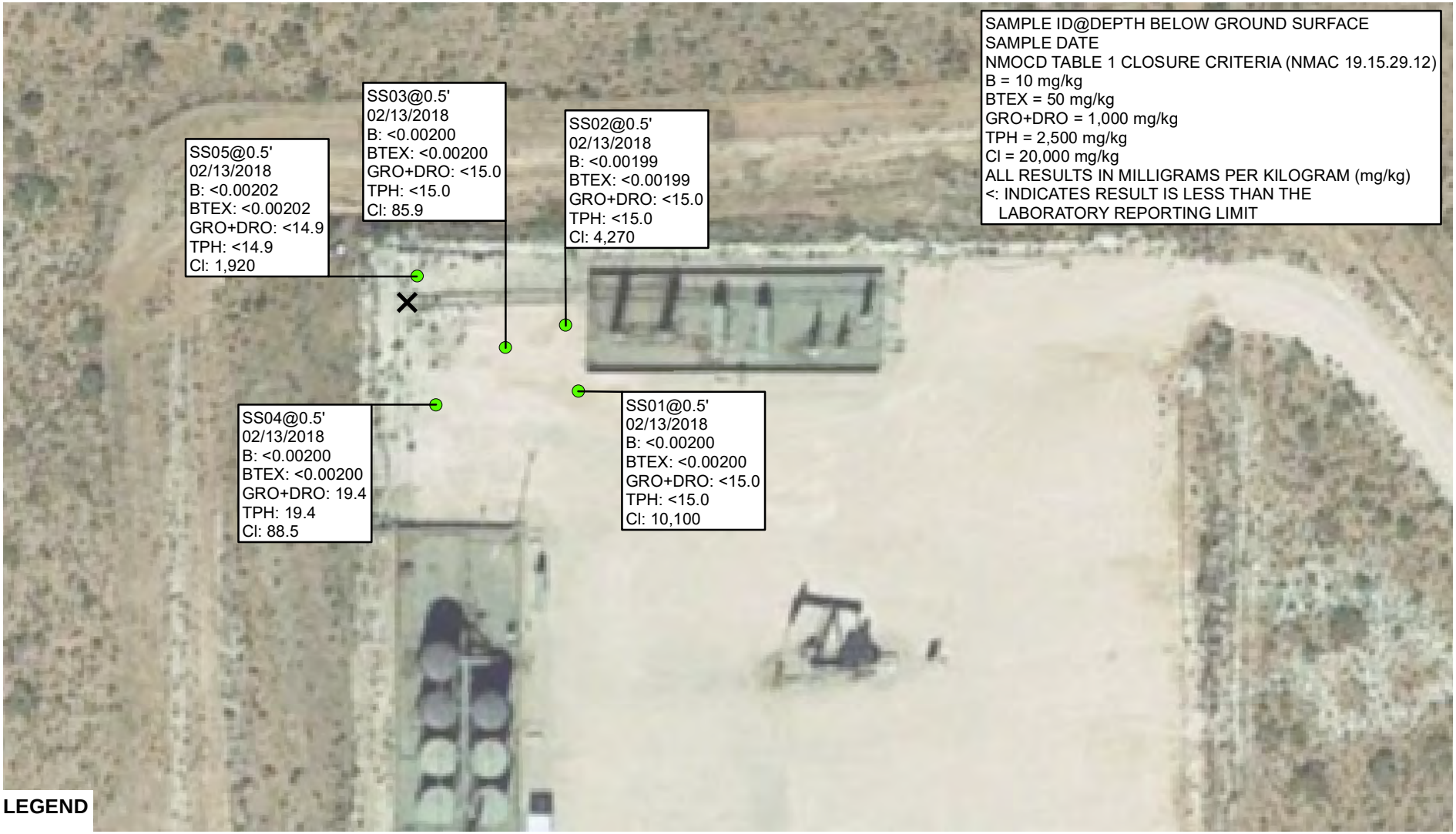

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

✕ RELEASE LOCATION

● PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 2RP-3103

0 60 120
Feet

N

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PLU CVX JV BS 016H
UNIT O SEC 3 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918048_PLU CVX JV BS #016H\012918048_FIG02_PRELIMINARY SS_2018_2RP-3103.mxd

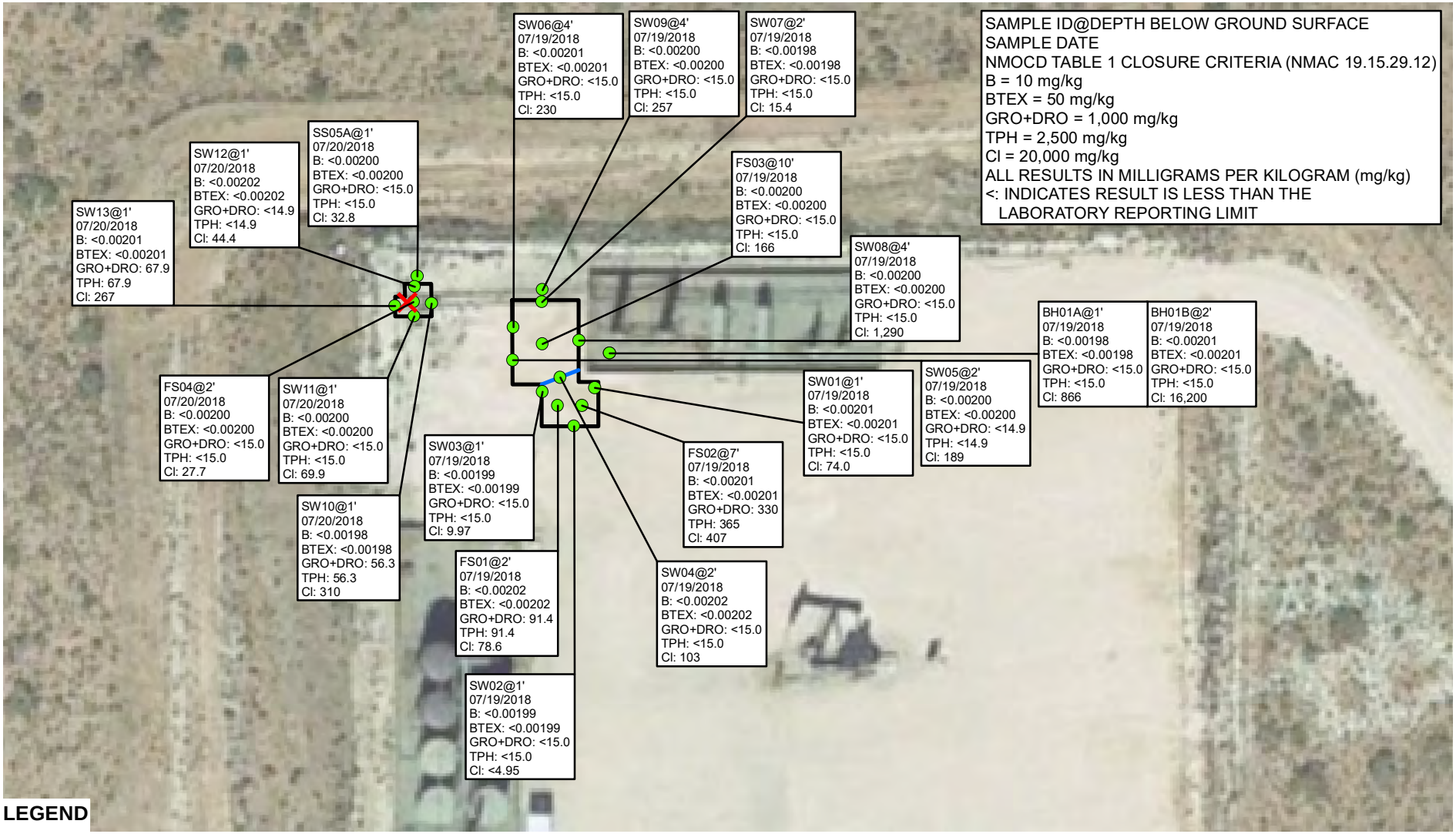

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- RELEASE LOCATION
- FINAL SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS
- CHANGE IN EXCAVATION DEPTH
- EXCAVATION EXTENT

0 60 120
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO – GASOLINE RANGE ORGANICS
DRO – DIESEL RANGE ORGANICS
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3103

FIGURE 3
FINAL SOIL SAMPLE LOCATIONS
PLU CVX JV BS 016H
UNIT O SEC 3 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918048_PLU CVX JV BS #016H\012918048_FIG03_FINAL SS_2018_2RP-3103.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PLU CVX JV BS 016H
REMEDIATION PERMIT NUMBER 2RP-3103
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	02/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10,100
SS02	0.5	02/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	4,270
SS03	0.5	02/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	85.9
SS04	0.5	02/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	19.4	<15.0	19.4	19.4	88.5
SS05	0.5	02/13/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	1,920
BH01A	1	07/19/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	866
BH01B	2	07/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	16,200
FS01	2	07/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	91.4	<15.0	91.4	91.4	78.6
FS02	7	07/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	330	35.3	330	365	407
FS03	10	07/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	166
SW01	1	07/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	74.0
SW02	1	07/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
SW03	1	07/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	9.97
SW04	2	07/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	103
SW05	2	07/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	189
SW06	4	07/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	230
SW07	2	07/19/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	15.4
SW08	4	07/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,290
SW09	4	07/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	257
FS04	2	07/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	27.7
SS05A	1	07/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.8
SW10	1	07/20/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	56.3	<15.0	56.3	56.3	310
SW11	1	07/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	69.9
SW12	1	07/20/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	44.4
SW13	1	07/20/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	67.9	<14.9	67.9	67.9	267
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

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
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NMAC - New Mexico Administrative Code

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4834)

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 08 2015
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

nAB1519556419

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU CVX JV BS 016H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner:	API No.3001540581

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	3	25S	30E	200		2130		Eddy

Latitude 32.153395 Longitude 103.867621

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 9 barrels	Volume Recovered: 2 barrels
Source of Release: Corrosion to steel connection	Date and Hour of Occurrence: 6-30-2015 @ 11:00am	Date and Hour of Discovery: 6-30-2015 @ 12:06pm
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
BOPCO EHS was notified of a release the occurred due to corrosion of a steel connection on the flowline. A vacuum truck was called to the location and recovered 2 barrels of produced water.

Describe Area Affected and Cleanup Action Taken.*
A vacuum truck recovered 2 barrels of produced water.

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: Bradley Blevins

Printed Name: Bradley Blevins

Title: Assistant Remediation Foreman

E-mail Address: bblevins@basspet.com

Date: 7-8-2015 Phone: 432-214-3704

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 7/14/15 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
~~SUBMIT REMEDIATION PROPOSAL NO~~
LATER THAN: 8/14/15

2RP-3103

* Attach Additional Sheets If Necessary

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-3103
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 # *(assigned by OCD):* 2RP-3103
Contact mailing address: 522 West Mermod, Suite 704, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.153395 Longitude -103.867621
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU CVX JV BS 016H	Site Type: Exploration and Production
Date Release Discovered: June 30, 2015	API# *(if applicable):* 30-015-40581

Unit Letter	Section	Township	Range	County
O	3	25S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls):	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls): 9	Volume Recovered (bbls): 2
	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 former operator BOPCO, was notified of a release that occurred due to corrosion of a steel connection on the flowline. A vacuum truck was called to the location and recovered 2 barrels of produced water.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3103
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

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: 2/11/2019

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-3103
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3103
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 2/11/2019

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-3103
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: 2/11/2019

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: LABORATORY ANALYTICAL REPORTS

Analytical Report 576505

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV BS 016H

22-FEB-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), 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 (T104704400-17-13)
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)

22-FEB-18

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

Reference: XENCO Report No(s): **576505**
PLU CVX JV BS 016H
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) 576505. 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. 576505 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
Odessa Laboratory Director

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 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	02-13-18 14:00	6 In	576505-001
SS02	S	02-13-18 14:05	6 In	576505-002
SS03	S	02-13-18 14:10	6 In	576505-003
SS04	S	02-13-18 14:15	6 In	576505-004
SS05	S	02-13-18 14:20	6 In	576505-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV BS 016H

Project ID:
Work Order Number(s): *576505*

Report Date: *22-FEB-18*
Date Received: *02/14/2018*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3041820 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 576505

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 016H

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Feb-14-18 06:00 pm

Report Date: 22-FEB-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	576505-001		576505-002		576505-003		576505-004		576505-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-13-18 14:00		Feb-13-18 14:05		Feb-13-18 14:10		Feb-13-18 14:15		Feb-13-18 14:20	
BTEX by EPA 8021B	***Extracted:***	Feb-16-18 16:00		Feb-16-18 16:00		Feb-16-18 16:00		Feb-16-18 16:00		Feb-16-18 16:00	
	Analyzed:	Feb-17-18 08:58		Feb-17-18 09:16		Feb-17-18 09:49		Feb-17-18 10:08		Feb-17-18 10:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00399	0.00399	<0.00400	0.00400	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Inorganic Anions by EPA 300	***Extracted:***	Feb-21-18 12:00		Feb-21-18 12:00		Feb-21-18 12:00		Feb-21-18 12:00		Feb-21-18 12:00	
	Analyzed:	Feb-21-18 23:12		Feb-21-18 23:34		Feb-21-18 23:41		Feb-21-18 23:49		Feb-21-18 23:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10100	98.0	4270	99.8	85.9	4.99	88.5	4.97	1920	25.0
TPH by SW8015 Mod	***Extracted:***	Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00		Feb-18-18 11:00	
	Analyzed:	Feb-18-18 21:39		Feb-18-18 21:59		Feb-18-18 22:21		Feb-18-18 22:41		Feb-18-18 23:02	
	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	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	19.4	15.0	<14.9	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	19.4	15.0	<14.9	14.9

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

Jessica Kramer
Odessa Laboratory Director

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-001	Date Collected:	02.13.18 14.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	AMB	Date Prep:	02.21.18 12.00	Basis:	Wet Weight
Seq Number:	3041794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10100**	98.0	mg/kg	02.21.18 23.12		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 21.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 21.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 21.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 21.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	02.18.18 21.39	
o-Terphenyl	84-15-1	118	%	70-135	02.18.18 21.39	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-001	Date Collected:	02.13.18 14.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.16.18 16.00	Basis:	Wet Weight
Seq Number:	3041820				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.17.18 08.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.18 08.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	80-120	02.17.18 08.58	
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.17.18 08.58	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-002	Date Collected:	02.13.18 14.05	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	AMB	Date Prep:	02.21.18 12.00	Basis:	Wet Weight
Seq Number:	3041794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4270**	99.8	mg/kg	02.21.18 23.34		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 21.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 21.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 21.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.18.18 21.59	
o-Terphenyl	84-15-1	101	%	70-135	02.18.18 21.59	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-002	Date Collected:	02.13.18 14.05	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.16.18 16.00	Basis:	Wet Weight
Seq Number:	3041820				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.17.18 09.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.17.18 09.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86	%	80-120	02.17.18 09.16	
4-Bromofluorobenzene	460-00-4	115	%	80-120	02.17.18 09.16	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-003	Date Collected:	02.13.18 14.10	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	AMB	Date Prep:	02.21.18 12.00	Basis:	Wet Weight
Seq Number:	3041794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.9**	4.99	mg/kg	02.21.18 23.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.18.18 22.21	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 22.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.18.18 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.18.18 22.21	
o-Terphenyl	84-15-1	96	%	70-135	02.18.18 22.21	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-003	Date Collected:	02.13.18 14.10	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.16.18 16.00	Basis:	Wet Weight
Seq Number:	3041820				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.17.18 09.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.18 09.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	80-120	02.17.18 09.49	
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.17.18 09.49	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-004	Date Collected:	02.13.18 14.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	AMB	Date Prep:	02.21.18 12.00	Basis:	Wet Weight
Seq Number:	3041794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**88.5**	4.97	mg/kg	02.21.18 23.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.18.18 22.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**19.4**	15.0	mg/kg	02.18.18 22.41		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.18.18 22.41	U	1
Total TPH	PHC635	**19.4**	15.0	mg/kg	02.18.18 22.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	02.18.18 22.41	
o-Terphenyl	84-15-1	109	%	70-135	02.18.18 22.41	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-004	Date Collected:	02.13.18 14.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.16.18 16.00	Basis:	Wet Weight
Seq Number:	3041820				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.17.18 10.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.17.18 10.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	80-120	02.17.18 10.08	
1,4-Difluorobenzene	540-36-3	91	%	80-120	02.17.18 10.08	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-005	Date Collected:	02.13.18 14.20	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	AMB	Date Prep:	02.21.18 12.00	Basis:	Wet Weight
Seq Number:	3041794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1920**	25.0	mg/kg	02.21.18 23.56		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.18.18 11.00	Basis:	Wet Weight
Seq Number:	3041595				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.18.18 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.18.18 23.02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	02.18.18 23.02	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.18.18 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	02.18.18 23.02	
o-Terphenyl	84-15-1	106	%	70-135	02.18.18 23.02	

Certificate of Analytical Results 576505

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	02.14.18 18.00
Lab Sample Id:	576505-005	Date Collected:	02.13.18 14.20	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.16.18 16.00	Basis:	Wet Weight
Seq Number:	3041820				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.17.18 10.26	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.17.18 10.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.17.18 10.26	
4-Bromofluorobenzene	460-00-4	119	%	80-120	02.17.18 10.26	

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

+ NELAC certification not offered for this compound.

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

QC Summary 576505

LT Environmental, Inc.

PLU CVX JV BS 016H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041794 Matrix: Solid Date Prep: 02.21.18
MB Sample Id: 7639565-1-BLK LCS Sample Id: 7639565-1-BKS LCSD Sample Id: 7639565-1-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	249	100	250	100	90-110	0	20	mg/kg	02.21.18 22:13	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041794 Matrix: Soil Date Prep: 02.21.18
Parent Sample Id: 576504-001 MS Sample Id: 576504-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	401	248	609	84	90-110	mg/kg	02.21.18 22:35	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041794 Matrix: Soil Date Prep: 02.21.18
Parent Sample Id: 576506-001 MS Sample Id: 576506-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	2150	1250	3260	89	90-110	mg/kg	02.22.18 00:11	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3041595 Matrix: Solid Date Prep: 02.18.18
MB Sample Id: 7639459-1-BLK LCS Sample Id: 7639459-1-BKS LCSD Sample Id: 7639459-1-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	865	87	995	100	70-135	14	35	mg/kg	02.18.18 14:23	
Diesel Range Organics (DRO)	<15.0	1000	812	81	930	93	70-135	14	35	mg/kg	02.18.18 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		96		101		70-135	%	02.18.18 14:23
o-Terphenyl	103		91		101		70-135	%	02.18.18 14:23

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
E = MSD/LCSD Result

QC Summary 576505

LT Environmental, Inc.

PLU CVX JV BS 016H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3041595 Matrix: Soil Date Prep: 02.18.18
Parent Sample Id: 576501-002 MS Sample Id: 576501-002 S MSD Sample Id: 576501-002 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	998	1020	102	992	99	70-135	3	35	mg/kg	02.18.18 15:48	
Diesel Range Organics (DRO)	<15.0	998	919	92	846	85	70-135	8	35	mg/kg	02.18.18 15:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		104		70-135	%	02.18.18 15:48
o-Terphenyl	108		97		70-135	%	02.18.18 15:48

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3041820 Matrix: Solid Date Prep: 02.16.18
MB Sample Id: 7639388-1-BLK LCS Sample Id: 7639388-1-BKS LCSD Sample Id: 7639388-1-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	0.0861	85	0.0895	89	70-130	4	35	mg/kg	02.17.18 01:54	
Toluene	<0.00202	0.101	0.0866	86	0.0857	85	70-130	1	35	mg/kg	02.17.18 01:54	
Ethylbenzene	<0.00202	0.101	0.0896	89	0.0886	88	71-129	1	35	mg/kg	02.17.18 01:54	
m,p-Xylenes	<0.00403	0.202	0.174	86	0.173	86	70-135	1	35	mg/kg	02.17.18 01:54	
o-Xylene	<0.00202	0.101	0.0893	88	0.0891	88	71-133	0	35	mg/kg	02.17.18 01:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		90		91		80-120	%	02.17.18 01:54
4-Bromofluorobenzene	110		114		114		80-120	%	02.17.18 01:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3041820 Matrix: Soil Date Prep: 02.16.18
Parent Sample Id: 576502-002 MS Sample Id: 576502-002 S MSD Sample Id: 576502-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0799	80	0.0780	79	70-130	2	35	mg/kg	02.17.18 02:31	
Toluene	<0.00199	0.0996	0.0804	81	0.0774	78	70-130	4	35	mg/kg	02.17.18 02:31	
Ethylbenzene	<0.00199	0.0996	0.0806	81	0.0781	79	71-129	3	35	mg/kg	02.17.18 02:31	
m,p-Xylenes	<0.00398	0.199	0.156	78	0.151	76	70-135	3	35	mg/kg	02.17.18 02:31	
o-Xylene	<0.00199	0.0996	0.0800	80	0.0772	78	71-133	4	35	mg/kg	02.17.18 02:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	81		82		80-120	%	02.17.18 02:31
4-Bromofluorobenzene	120		115		80-120	%	02.17.18 02:31

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

XENCO LABORATORIES

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Stafford,Texas (281-240-4200)

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 # 576505

Client / Reporting Information

Company Name / Branch: LTE / Permian

Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705

Email: Abaker@ltenv.com

Phone No: 432-704-5178

Project Contact: Adrian Baker

Samplers's Name: [redacted]

Project Information

Project Name/Number: PLU CVX JV BS Ø16H

Project Location: NM

Invoice To: XTO Energy - Kyle Littrell

PO Number: API 30-015-40581 2RP-3103

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 EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1	Field Comments
1	SS01	6"	2-13-18	14:00	S	1								X	X	X	X	
2	SS02			14:05														
3	SS03			14:10														
4	SS04			14:15														
5	SS05			14:20														
6																		
7																		
8																		
9																		
10																		

Temp: 3.9 IR ID:R-8

CF:(0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 3.7

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

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

Data Deliverable Information

- [x] 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: Sampler Danny Burns

API: 30-015-40581

2RP-3103

FED-EX / UPS: Tracking #

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		2-14-18	1	2	2-14-18 18:00	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time: 2-14-18 18:00	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. Thermo. Corr. Factor

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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/14/2018 06:00:00 PM

Work Order #: 576505

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)?	3.7
#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)?	**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: 02/15/2018

Checklist reviewed by: Jessica Kramer Date: 02/15/2018

Jessica Kramer

Analytical Report 593216

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX BS 016H

27-JUL-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)

27-JUL-18

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

Reference: XENCO Report No(s): **593216**
PLU CVX BS 016H
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) 593216. 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. 593216 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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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	07-19-18 14:50	1 ft	593216-001
SW02	S	07-19-18 14:45	1 ft	593216-002
SW03	S	07-19-18 14:30	1 ft	593216-003
SW04	S	07-19-18 13:00	2 ft	593216-004
SW05	S	07-19-18 13:00	2 ft	593216-005
SW06	S	07-19-18 14:30	4 ft	593216-006
SW07	S	07-19-18 15:30	2 ft	593216-007
SW08	S	07-19-18 15:15	4 ft	593216-008
SW09	S	07-19-18 13:30	4 ft	593216-009
FS01	S	07-19-18 13:50	2 ft	593216-010
FS02	S	07-19-18 12:30	7 ft	593216-011
FS03	S	07-19-18 15:00	10 ft	593216-012
BH01A	S	07-19-18 11:50	1 ft	593216-013
BH01B	S	07-19-18 12:05	2 ft	593216-014

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX BS 016H

Project ID:
Work Order Number(s): *593216*

Report Date: *27-JUL-18*
Date Received: *07/21/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3057747 BTEX by EPA 8021B
Lab Sample ID 593216-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 593216-006.
The Laboratory Control Sample for Toluene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3057911 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3057926 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 593216

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX BS 016H

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

Date Received in Lab: Sat Jul-21-18 09:00 am
Report Date: 27-JUL-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	593216-001		593216-002		593216-003		593216-004		593216-005		593216-006	
	Field Id:	SW01		SW02		SW03		SW04		SW05		SW06	
	Depth:	1- ft		1- ft		1- ft		2- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-19-18 14:50		Jul-19-18 14:45		Jul-19-18 14:30		Jul-19-18 13:00		Jul-19-18 13:00		Jul-19-18 14:30	
BTEX by EPA 8021B	*Extracted:*	Jul-25-18 18:00		Jul-25-18 18:00		Jul-25-18 18:00		Jul-25-18 18:00		Jul-25-18 18:00		Jul-25-18 10:00	
	Analyzed:	Jul-26-18 11:45		Jul-26-18 12:06		Jul-26-18 13:09		Jul-26-18 13:30		Jul-26-18 13:51		Jul-25-18 12:31	
	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	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00404	0.00404	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	*Extracted:*	Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00	
	Analyzed:	Jul-26-18 17:13		Jul-26-18 18:13		Jul-26-18 18:19		Jul-26-18 18:24		Jul-26-18 18:30		Jul-26-18 18:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		74.0	4.96	<4.95	4.95	9.97	4.98	103	4.96	189	5.03	230	4.96
TPH by SW8015 Mod	*Extracted:*	Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00	
	Analyzed:	Jul-23-18 13:00		Jul-23-18 14:00		Jul-23-18 14:19		Jul-23-18 14:39		Jul-23-18 14:59		Jul-23-18 15:19	
	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	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 593216

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX BS 016H

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

Date Received in Lab: Sat Jul-21-18 09:00 am
Report Date: 27-JUL-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	593216-007		593216-008		593216-009		593216-010		593216-011		593216-012	
	Field Id:	SW07		SW08		SW09		FS01		FS02		FS03	
	Depth:	2- ft		4- ft		4- ft		2- ft		7- ft		10- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-19-18 15:30		Jul-19-18 15:15		Jul-19-18 13:30		Jul-19-18 13:50		Jul-19-18 12:30		Jul-19-18 15:00	
BTEX by EPA 8021B	*Extracted:*	Jul-26-18 16:30		Jul-26-18 16:30		Jul-26-18 16:30		Jul-26-18 16:30		Jul-26-18 16:30		Jul-26-18 16:30	
	Analyzed:	Jul-27-18 04:08		Jul-27-18 05:31		Jul-27-18 06:33		Jul-27-18 04:29		Jul-27-18 04:50		Jul-27-18 05:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00397	0.00397	<0.00399	0.00399	<0.00401	0.00401	<0.00403	0.00403	<0.00402	0.00402	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00		Jul-26-18 16:00	
	Analyzed:	Jul-26-18 18:51		Jul-26-18 18:57		Jul-26-18 19:13		Jul-26-18 19:18		Jul-26-18 19:24		Jul-26-18 19:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.4	5.00	1290	24.8	257	4.99	78.6	5.04	407	4.98	166	5.01
TPH by SW8015 Mod	*Extracted:*	Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00		Jul-23-18 11:00	
	Analyzed:	Jul-23-18 15:39		Jul-23-18 15:59		Jul-23-18 16:19		Jul-23-18 16:39		Jul-23-18 17:39		Jul-23-18 17:59	
	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	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	91.4	15.0	330	14.9	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	35.3	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	91.4	15.0	365	14.9	<15.0	15.0

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 593216

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX BS 016H

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

Date Received in Lab: Sat Jul-21-18 09:00 am
Report Date: 27-JUL-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	593216-013		593216-014					
	Field Id:	BH01A		BH01B					
	Depth:	1- ft		2- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jul-19-18 11:50		Jul-19-18 12:05					
BTEX by EPA 8021B	***Extracted:***	Jul-26-18 16:30		Jul-26-18 16:30					
	Analyzed:	Jul-27-18 06:54		Jul-27-18 07:14					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00201	0.00201				
Toluene		<0.00198	0.00198	<0.00201	0.00201				
Ethylbenzene		<0.00198	0.00198	<0.00201	0.00201				
m,p-Xylenes		<0.00397	0.00397	<0.00402	0.00402				
o-Xylene		<0.00198	0.00198	<0.00201	0.00201				
Total Xylenes		<0.00198	0.00198	<0.00201	0.00201				
Total BTEX		<0.00198	0.00198	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Jul-26-18 16:00		Jul-26-18 16:00					
	Analyzed:	Jul-26-18 19:34		Jul-26-18 19:40					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		866	4.96	16200	248				
TPH by SW8015 Mod	***Extracted:***	Jul-23-18 11:00		Jul-23-18 11:00					
	Analyzed:	Jul-23-18 18:20		Jul-23-18 18:40					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-001	Date Collected:	07.19.18 14.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.0**	4.96	mg/kg	07.26.18 17.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 13.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 13.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 13.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 13.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.23.18 13.00	
o-Terphenyl	84-15-1	93	%	70-135	07.23.18 13.00	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-001	Date Collected:	07.19.18 14.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 18.00	Basis:	Wet Weight
Seq Number:	3057911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.26.18 11.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.26.18 11.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.26.18 11.45	
4-Bromofluorobenzene	460-00-4	92	%	70-130	07.26.18 11.45	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-002	Date Collected:	07.19.18 14.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	07.26.18 18.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 14.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 14.00	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 14.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 14.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.23.18 14.00	
o-Terphenyl	84-15-1	87	%	70-135	07.23.18 14.00	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-002	Date Collected:	07.19.18 14.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 18.00	Basis:	Wet Weight
Seq Number:	3057911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.18 12.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.18 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.26.18 12.06	
4-Bromofluorobenzene	460-00-4	78	%	70-130	07.26.18 12.06	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-003	Date Collected:	07.19.18 14.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.97**	4.98	mg/kg	07.26.18 18.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 14.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 14.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.23.18 14.19	
o-Terphenyl	84-15-1	92	%	70-135	07.23.18 14.19	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-003	Date Collected:	07.19.18 14.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 18.00	Basis:	Wet Weight
Seq Number:	3057911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.26.18 13.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.26.18 13.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	07.26.18 13.09	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.26.18 13.09	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-004	Date Collected:	07.19.18 13.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**103**	4.96	mg/kg	07.26.18 18.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 14.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 14.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 14.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 14.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.23.18 14.39	
o-Terphenyl	84-15-1	94	%	70-135	07.23.18 14.39	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SW04**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-004	Date Collected:	07.19.18 13.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 18.00	Basis:	Wet Weight
Seq Number:	3057911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.26.18 13.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.26.18 13.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.26.18 13.30	
4-Bromofluorobenzene	460-00-4	94	%	70-130	07.26.18 13.30	

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Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-005	Date Collected:	07.19.18 13.00	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**189**	5.03	mg/kg	07.26.18 18.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.23.18 14.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.23.18 14.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.23.18 14.59	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.23.18 14.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.23.18 14.59	
o-Terphenyl	84-15-1	94	%	70-135	07.23.18 14.59	

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Sample Id:	**SW05**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-005	Date Collected:	07.19.18 13.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 18.00	Basis:	Wet Weight
Seq Number:	3057911				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.26.18 13.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.26.18 13.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	07.26.18 13.51	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.26.18 13.51	

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Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-006	Date Collected:	07.19.18 14.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	4.96	mg/kg	07.26.18 18.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 15.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 15.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 15.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 15.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.23.18 15.19	
o-Terphenyl	84-15-1	94	%	70-135	07.23.18 15.19	

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Sample Id:	**SW06**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-006	Date Collected:	07.19.18 14.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.25.18 10.00	Basis:	Wet Weight
Seq Number:	3057747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.25.18 12.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.25.18 12.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.25.18 12.31	
4-Bromofluorobenzene	460-00-4	88	%	70-130	07.25.18 12.31	

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Sample Id:	**SW07**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-007	Date Collected:	07.19.18 15.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.4**	5.00	mg/kg	07.26.18 18.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 15.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 15.39	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 15.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 15.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.23.18 15.39	
o-Terphenyl	84-15-1	97	%	70-135	07.23.18 15.39	

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Sample Id:	**SW07**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-007	Date Collected:	07.19.18 15.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.27.18 04.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.18 04.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	07.27.18 04.08	
4-Bromofluorobenzene	460-00-4	91	%	70-130	07.27.18 04.08	

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Sample Id:	**SW08**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-008	Date Collected:	07.19.18 15.15	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1290**	24.8	mg/kg	07.26.18 18.57		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 15.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 15.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.23.18 15.59	
o-Terphenyl	84-15-1	93	%	70-135	07.23.18 15.59	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SW08**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-008	Date Collected:	07.19.18 15.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.18 05.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 05.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.18 05.31	
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.27.18 05.31	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**SW09**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-009	Date Collected:	07.19.18 13.30	Sample Depth:	4 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**257**	4.99	mg/kg	07.26.18 19.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 16.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 16.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 16.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 16.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.23.18 16.19	
o-Terphenyl	84-15-1	94	%	70-135	07.23.18 16.19	

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Sample Id:	**SW09**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-009	Date Collected:	07.19.18 13.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.27.18 06.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 06.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.18 06.33	
4-Bromofluorobenzene	460-00-4	88	%	70-130	07.27.18 06.33	

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LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-010	Date Collected:	07.19.18 13.50	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**78.6**	5.04	mg/kg	07.26.18 19.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 16.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	**91.4**	15.0	mg/kg	07.23.18 16.39		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 16.39	U	1
Total TPH	PHC635	**91.4**	15.0	mg/kg	07.23.18 16.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.23.18 16.39	
o-Terphenyl	84-15-1	99	%	70-135	07.23.18 16.39	

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LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-010	Date Collected:	07.19.18 13.50	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.18 04.29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.18 04.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	07.27.18 04.29	
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.18 04.29	

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LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-011	Date Collected:	07.19.18 12.30	Sample Depth:	7 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**407**	4.98	mg/kg	07.26.18 19.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.23.18 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	**330**	14.9	mg/kg	07.23.18 17.39		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**35.3**	14.9	mg/kg	07.23.18 17.39		1
Total TPH	PHC635	**365**	14.9	mg/kg	07.23.18 17.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.23.18 17.39	
o-Terphenyl	84-15-1	102	%	70-135	07.23.18 17.39	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-011	Date Collected:	07.19.18 12.30	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.18 04.50	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.18 04.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	07.27.18 04.50	
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.27.18 04.50	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-012	Date Collected:	07.19.18 15.00	Sample Depth:	10 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**166**	5.01	mg/kg	07.26.18 19.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 17.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 17.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.23.18 17.59	
o-Terphenyl	84-15-1	90	%	70-135	07.23.18 17.59	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-012	Date Collected:	07.19.18 15.00	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.18 05.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 05.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.27.18 05.10	
4-Bromofluorobenzene	460-00-4	89	%	70-130	07.27.18 05.10	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-013	Date Collected:	07.19.18 11.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**866**	4.96	mg/kg	07.26.18 19.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 18.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 18.20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 18.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.23.18 18.20	
o-Terphenyl	84-15-1	101	%	70-135	07.23.18 18.20	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-013	Date Collected:	07.19.18 11.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.27.18 06.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.18 06.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.27.18 06.54	
4-Bromofluorobenzene	460-00-4	85	%	70-130	07.27.18 06.54	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-014	Date Collected:	07.19.18 12.05	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.26.18 16.00	Basis:	Wet Weight
Seq Number:	3057949				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16200**	248	mg/kg	07.26.18 19.40		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.23.18 11.00	Basis:	Wet Weight
Seq Number:	3057442				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.23.18 18.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.23.18 18.40	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.23.18 18.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.23.18 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.23.18 18.40	
o-Terphenyl	84-15-1	97	%	70-135	07.23.18 18.40	

Certificate of Analytical Results 593216

LT Environmental, Inc., Arvada, CO

PLU CVX BS 016H

Sample Id:	**BH01B**	Matrix:	Soil	Date Received:	07.21.18 09.00
Lab Sample Id:	593216-014	Date Collected:	07.19.18 12.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.26.18 16.30	Basis:	Wet Weight
Seq Number:	3057926				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.18 07.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.18 07.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	07.27.18 07.14	
1,4-Difluorobenzene	540-36-3	110	%	70-130	07.27.18 07.14	

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 593216

LT Environmental, Inc.

PLU CVX BS 016H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3057949 Matrix: Solid Date Prep: 07.26.18
MB Sample Id: 7659198-1-BLK LCS Sample Id: 7659198-1-BKS LCSD Sample Id: 7659198-1-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	251	100	90-110	0	20	mg/kg	07.26.18 16:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3057949 Matrix: Soil Date Prep: 07.26.18
Parent Sample Id: 593216-001 MS Sample Id: 593216-001 S MSD Sample Id: 593216-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	74.0	248	327	102	326	102	90-110	0	20	mg/kg	07.26.18 17:25	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3057949 Matrix: Soil Date Prep: 07.26.18
Parent Sample Id: 593216-006 MS Sample Id: 593216-006 S MSD Sample Id: 593216-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	230	248	474	98	496	107	90-110	5	20	mg/kg	07.26.18 18:40	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3057442 Matrix: Solid Date Prep: 07.23.18
MB Sample Id: 7658951-1-BLK LCS Sample Id: 7658951-1-BKS LCSD Sample Id: 7658951-1-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	936	94	936	94	70-135	0	20	mg/kg	07.23.18 12:21	
Diesel Range Organics (DRO)	<15.0	1000	955	96	959	96	70-135	0	20	mg/kg	07.23.18 12:21	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		124		118		70-135	%	07.23.18 12:21
o-Terphenyl	113		114		117		70-135	%	07.23.18 12:21

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 593216

LT Environmental, Inc.

PLU CVX BS 016H

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3057442 | Matrix: Soil | Date Prep: 07.23.18
Parent Sample Id: 593216-001 | MS Sample Id: 593216-001 S | MSD Sample Id: 593216-001 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	998	969	97	929	93	70-135	4	20	mg/kg	07.23.18 13:20	
Diesel Range Organics (DRO)	<15.0	998	1010	101	971	97	70-135	4	20	mg/kg	07.23.18 13:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		117		70-135	%	07.23.18 13:20
o-Terphenyl	102		97		70-135	%	07.23.18 13:20

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3057747 | Matrix: Solid | Date Prep: 07.25.18
MB Sample Id: 7659101-1-BLK | LCS Sample Id: 7659101-1-BKS | LCSD Sample Id: 7659101-1-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	0.100	0.0990	99	0.102	102	70-130	3	35	mg/kg	07.25.18 10:26	
Toluene	<0.00200	0.100	0.0966	97	0.0993	99	70-130	3	35	mg/kg	07.25.18 10:26	
Ethylbenzene	<0.00200	0.100	0.108	108	0.111	111	70-130	3	35	mg/kg	07.25.18 10:26	
m,p-Xylenes	<0.00401	0.200	0.214	107	0.220	110	70-130	3	35	mg/kg	07.25.18 10:26	
o-Xylene	<0.00200	0.100	0.104	104	0.108	108	70-130	4	35	mg/kg	07.25.18 10:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		104		110		70-130	%	07.25.18 10:26
4-Bromofluorobenzene	84		80		86		70-130	%	07.25.18 10:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3057911 | Matrix: Solid | Date Prep: 07.25.18
MB Sample Id: 7659186-1-BLK | LCS Sample Id: 7659186-1-BKS | LCSD Sample Id: 7659186-1-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	0.0957	95	0.0861	86	70-130	11	35	mg/kg	07.26.18 06:29	
Toluene	<0.00202	0.101	0.0936	93	0.0852	85	70-130	9	35	mg/kg	07.26.18 06:29	
Ethylbenzene	<0.00202	0.101	0.102	101	0.0943	94	70-130	8	35	mg/kg	07.26.18 06:29	
m,p-Xylenes	<0.00403	0.202	0.200	99	0.186	93	70-130	7	35	mg/kg	07.26.18 06:29	
o-Xylene	<0.00202	0.101	0.0991	98	0.0947	95	70-130	5	35	mg/kg	07.26.18 06:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		108		104		70-130	%	07.26.18 06:29
4-Bromofluorobenzene	91		86		93		70-130	%	07.26.18 06:29

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 593216

LT Environmental, Inc.

PLU CVX BS 016H

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3057926 — Matrix: Solid — Date Prep: 07.26.18
MB Sample Id: 7659207-1-BLK — LCS Sample Id: 7659207-1-BKS — LCSD Sample Id: 7659207-1-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	0.0880	88	0.0916	91	70-130	4	35	mg/kg	07.26.18 22:18	
Toluene	<0.00201	0.100	0.0881	88	0.0879	87	70-130	0	35	mg/kg	07.26.18 22:18	
Ethylbenzene	<0.00201	0.100	0.0968	97	0.0900	89	70-130	7	35	mg/kg	07.26.18 22:18	
m,p-Xylenes	<0.00402	0.201	0.191	95	0.175	87	70-130	9	35	mg/kg	07.26.18 22:18	
o-Xylene	<0.00201	0.100	0.0947	95	0.0873	86	70-130	8	35	mg/kg	07.26.18 22:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		111		110		70-130	%	07.26.18 22:18
4-Bromofluorobenzene	88		79		84		70-130	%	07.26.18 22:18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3057747 — Matrix: Soil — Date Prep: 07.25.18
Parent Sample Id: 593216-006 — MS Sample Id: 593216-006 S — MSD Sample Id: 593216-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0731	74	0.0720	72	70-130	2	35	mg/kg	07.25.18 11:07	
Toluene	<0.00198	0.0992	0.0699	70	0.0675	68	70-130	3	35	mg/kg	07.25.18 11:07	X
Ethylbenzene	<0.00198	0.0992	0.0765	77	0.0718	72	70-130	6	35	mg/kg	07.25.18 11:07	
m,p-Xylenes	<0.00397	0.198	0.150	76	0.141	71	70-130	6	35	mg/kg	07.25.18 11:07	
o-Xylene	<0.00198	0.0992	0.0730	74	0.0695	70	70-130	5	35	mg/kg	07.25.18 11:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	07.25.18 11:07
4-Bromofluorobenzene	86		86		70-130	%	07.25.18 11:07

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3057911 — Matrix: Soil — Date Prep: 07.25.18
Parent Sample Id: 593218-007 — MS Sample Id: 593218-007 S — MSD Sample Id: 593218-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0838	84	0.0834	83	70-130	0	35	mg/kg	07.26.18 07:10	
Toluene	<0.00199	0.0994	0.0825	83	0.0818	82	70-130	1	35	mg/kg	07.26.18 07:10	
Ethylbenzene	<0.00199	0.0994	0.0914	92	0.0902	90	70-130	1	35	mg/kg	07.26.18 07:10	
m,p-Xylenes	<0.00398	0.199	0.180	90	0.176	88	70-130	2	35	mg/kg	07.26.18 07:10	
o-Xylene	<0.00199	0.0994	0.0893	90	0.0873	87	70-130	2	35	mg/kg	07.26.18 07:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		106		70-130	%	07.26.18 07:10
4-Bromofluorobenzene	88		85		70-130	%	07.26.18 07:10

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 593216

LT Environmental, Inc.

PLU CVX BS 016H

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

Seq Number: 3057926 Matrix: Soil Date Prep: 07.26.18

Parent Sample Id: 593218-013 MS Sample Id: 593218-013 S MSD Sample Id: 593218-013 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	0.101	0.0674	67	0.0838	83	70-130	22	35	mg/kg	07.26.18 23:00	X
Toluene	<0.00201	0.101	0.0674	67	0.0960	95	70-130	35	35	mg/kg	07.26.18 23:00	X
Ethylbenzene	<0.00201	0.101	0.0706	70	0.0999	99	70-130	34	35	mg/kg	07.26.18 23:00	
m,p-Xylenes	<0.00402	0.201	0.138	69	0.181	90	70-130	27	35	mg/kg	07.26.18 23:00	X
o-Xylene	<0.00201	0.101	0.0701	69	0.0965	96	70-130	32	35	mg/kg	07.26.18 23:00	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	127		108		70-130	%	07.26.18 23:00
4-Bromofluorobenzene	91		84		70-130	%	07.26.18 23:00

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

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
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 2

Xenco Quote #

Xenco Job # 593216

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc - Permian office
Company Address: 3300 North "A" street, Building 1, #103 midland TX 79705
Email: Abaker@LTenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name Garrett Green

Project Information PLU CVX BS01GH

Project Name/Number: PLU CVX BS 01GH ~~on PLU 03 25-30 pad~~
Project Location: ~~2RP3103~~ Carlsbad, NM
Invoice To: XTO Energy Kyle Littrell
PO Number: 2RP ~~3168~~ 3103

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 (only BTEX)	TPH (MRO, GRO, DRO) 8015	Chloride (300.00)	Field Comments
1	SW01	1'	7/19	1450	S	1								X	X	X	X	
2	SW02	1'	7/19	1445	S	1								X	X	X	X	
3	SW03	1'	7/19	1430	S	1								X	X	X	X	
4	SW04	2'	7/19	1300	S	1								X	X	X	X	
5	SW05	2'	7/19	1300	S	1								X	X	X	X	
6	SW06	4'	7/19	1430	S	1								X	X	X	X	
7	SW07	2'	7/19	1530	S	1								X	X	X	X	
8	SW08	4'	7/19	1515	S	1								X	X	X	X	
9	SW09	4'	7/19	1330	S	1								X	X	X	X	
10	FS01	2 ~~1350~~	7/19	1350	S	1								X	X	X	X	

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 #

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	Garrett Green	7/20/2018 9:30	Tim Elliott			
2				Tamie Wilson	7/20/18 15:30	Rachel 7/20/18 0900
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: X — Cooler Temp. 0.3 #8 — 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.

XENCO LABORATORIES

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Stafford,Texas (281-240-4200)

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Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

www.xenco.com

CHAIN OF CUSTODY

Page 2 Of 2

Xenco Quote #

Xenco Job # 593216

Client / Reporting Information

Company Name / Branch: LT Environmental inc. Permian office

Company Address: 3300 N. "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 Garrett Green

Project Information PLU CVX BS 016H

Project Name/Number: PLU CVX BS 016H ~~on PLU 03-25-30pad~~

Project Location: ~~2RP-3103~~ Carlsbad, NM

Invoice To: XTO Energy Kyle Littrell

PO Number: 2RP 3103

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 (only BTEX)	TPH (MRO, GRO, DRO) 8015	Chloride (300.00)	Field Comments
1	FS 02	7'	7/19	12:30	S	1								X	X	X	X	
2	FS 03	10'	7/19	15:00	S	1								X	X	X	X	
3	BH 01 A	1'	7/19	11:50	S	1								X	X	X	X	
4	BH 01 B	2'	7/19	12:05	S	1								X	X	X	X	
5																		
6																		
7																		
8																		
9																		
10																		

07/19/2018

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 #

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		7/20/2018 9:30				
2					7/20/18 15:30	7/21/18
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: Y

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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/21/2018 09:00:00 AM

Work Order #: 593216

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: 07/23/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 07/23/2018
Jessica Kramer

Analytical Report 593335

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU CVX JV BS 016H

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): **593335**
PLU CVX JV BS 016H
Project Address: NM 2RP3103

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) 593335. 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. 593335 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 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04	S	07-20-18 08:45	2 ft	593335-001
SS05A	S	07-20-18 09:30	1 ft	593335-002
SW10	S	07-20-18 12:30	1 ft	593335-003
SW11	S	07-20-18 13:50	1 ft	593335-004
SW12	S	07-20-18 13:50	1 ft	593335-005
SW13	S	07-20-18 15:00	1 ft	593335-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV BS 016H

Project ID:
Work Order Number(s): *593335*

Report Date: *03-AUG-18*
Date Received: *07/24/2018*

Sample receipt non conformances and comments:

PER CLIENTS EMAIL, CHANGED SAMPLE DEPTH FOR SAMPLE 001 FROM 1.5' TO 2' JKR 08/03/18
V1.0001 GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3058037 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 593335

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 016H

Project Id:
Contact: Adrian Baker
Project Location: NM 2RP3103

Date Received in Lab: Tue Jul-24-18 11:09 am
Report Date: 03-AUG-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	593335-001		593335-002		593335-003		593335-004		593335-005		593335-006	
	Field Id:	FS04		SS05A		SW10		SW11		SW12		SW13	
	Depth:	2- ft		1- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-20-18 08:45		Jul-20-18 09:30		Jul-20-18 12:30		Jul-20-18 13:50		Jul-20-18 13:50		Jul-20-18 15:00	
BTEX by EPA 8021B	***Extracted:***	Jul-27-18 10:00		Jul-27-18 10:00		Jul-27-18 10:00		Jul-27-18 10:00		Jul-27-18 10:00		Jul-27-18 10:00	
	Analyzed:	Jul-27-18 13:49		Jul-27-18 14:11		Jul-27-18 14:32		Jul-27-18 14:53		Jul-27-18 15:14		Jul-27-18 15:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00397	0.00397	<0.00399	0.00399	<0.00403	0.00403	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202	<0.00201	0.00201
Inorganic Anions by EPA 300	***Extracted:***	Jul-27-18 15:15		Jul-27-18 15:15		Jul-27-18 15:15		Jul-27-18 15:15		Jul-27-18 15:15		Jul-27-18 15:15	
	Analyzed:	Jul-27-18 16:58		Jul-27-18 15:56		Jul-27-18 17:03		Jul-27-18 17:09		Jul-27-18 17:14		Jul-27-18 17:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		27.7	4.95	32.8	5.01	310	4.96	69.9	5.03	44.4	5.04	267	4.97
TPH by SW8015 Mod	***Extracted:***	Jul-24-18 13:00		Jul-24-18 13:00		Jul-24-18 13:00		Jul-24-18 13:00		Jul-24-18 13:00		Jul-24-18 13:00	
	Analyzed:	Jul-24-18 15:25		Jul-24-18 15:45		Jul-24-18 16:05		Jul-24-18 16:25		Jul-24-18 16:45		Jul-24-18 17:04	
	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	<14.9	14.9	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	56.3	15.0	<15.0	15.0	<14.9	14.9	67.9	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	56.3	15.0	<15.0	15.0	<14.9	14.9	67.9	14.9

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-001	Date Collected:	07.20.18 08.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.7**	4.95	mg/kg	07.27.18 16.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.24.18 15.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.24.18 15.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.24.18 15.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.24.18 15.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.24.18 15.25	
o-Terphenyl	84-15-1	100	%	70-135	07.24.18 15.25	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-001	Date Collected:	07.20.18 08.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.27.18 13.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 13.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.27.18 13.49	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.27.18 13.49	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-002	Date Collected:	07.20.18 09.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.8**	5.01	mg/kg	07.27.18 15.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.24.18 15.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.24.18 15.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.24.18 15.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.24.18 15.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.24.18 15.45	
o-Terphenyl	84-15-1	99	%	70-135	07.24.18 15.45	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SS05A**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-002	Date Collected:	07.20.18 09.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.18 14.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 14.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.27.18 14.11	
1,4-Difluorobenzene	540-36-3	106	%	70-130	07.27.18 14.11	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-003	Date Collected:	07.20.18 12.30	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**310**	4.96	mg/kg	07.27.18 17.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.24.18 16.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	**56.3**	15.0	mg/kg	07.24.18 16.05		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.24.18 16.05	U	1
Total TPH	PHC635	**56.3**	15.0	mg/kg	07.24.18 16.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.24.18 16.05	
o-Terphenyl	84-15-1	109	%	70-135	07.24.18 16.05	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-003	Date Collected:	07.20.18 12.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.27.18 14.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.27.18 14.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.27.18 14.32	
4-Bromofluorobenzene	460-00-4	90	%	70-130	07.27.18 14.32	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-004	Date Collected:	07.20.18 13.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.9**	5.03	mg/kg	07.27.18 17.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.24.18 16.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.24.18 16.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.24.18 16.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.24.18 16.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.24.18 16.25	
o-Terphenyl	84-15-1	99	%	70-135	07.24.18 16.25	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-004	Date Collected:	07.20.18 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.27.18 14.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.27.18 14.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.27.18 14.53	
1,4-Difluorobenzene	540-36-3	112	%	70-130	07.27.18 14.53	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-005	Date Collected:	07.20.18 13.50	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.4**	5.04	mg/kg	07.27.18 17.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.24.18 16.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.24.18 16.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.24.18 16.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.24.18 16.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.24.18 16.45	
o-Terphenyl	84-15-1	92	%	70-135	07.24.18 16.45	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-005	Date Collected:	07.20.18 13.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.27.18 15.14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.27.18 15.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.27.18 15.14	
4-Bromofluorobenzene	460-00-4	85	%	70-130	07.27.18 15.14	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-006	Date Collected:	07.20.18 15.00	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	07.27.18 15.15	Basis:	Wet Weight
Seq Number:	3058212				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**267**	4.97	mg/kg	07.27.18 17.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.18 13.00	Basis:	Wet Weight
Seq Number:	3057652				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.24.18 17.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**67.9**	14.9	mg/kg	07.24.18 17.04		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.24.18 17.04	U	1
Total TPH	PHC635	**67.9**	14.9	mg/kg	07.24.18 17.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.24.18 17.04	
o-Terphenyl	84-15-1	97	%	70-135	07.24.18 17.04	

Certificate of Analytical Results 593335

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 016H

Sample Id:	**SW13**	Matrix:	Soil	Date Received:	07.24.18 11.09
Lab Sample Id:	593335-006	Date Collected:	07.20.18 15.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.27.18 10.00	Basis:	Wet Weight
Seq Number:	3058037				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.27.18 15.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.27.18 15.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.27.18 15.34	
4-Bromofluorobenzene	460-00-4	90	%	70-130	07.27.18 15.34	

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 593335

LT Environmental, Inc.

PLU CVX JV BS 016H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058212 Matrix: Solid Date Prep: 07.27.18
MB Sample Id: 7659295-1-BLK LCS Sample Id: 7659295-1-BKS LCSD Sample Id: 7659295-1-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	250	100	251	100	90-110	0	20	mg/kg	07.27.18 15:45	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058212 Matrix: Soil Date Prep: 07.27.18
Parent Sample Id: 593335-002 MS Sample Id: 593335-002 S MSD Sample Id: 593335-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.8	251	289	102	290	102	90-110	0	20	mg/kg	07.27.18 16:01	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3058212 Matrix: Soil Date Prep: 07.27.18
Parent Sample Id: 593336-001 MS Sample Id: 593336-001 S MSD Sample Id: 593336-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	413	253	643	91	644	91	90-110	0	20	mg/kg	07.27.18 17:25	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3057652 Matrix: Solid Date Prep: 07.24.18
MB Sample Id: 7659050-1-BLK LCS Sample Id: 7659050-1-BKS LCSD Sample Id: 7659050-1-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	931	93	948	95	70-135	2	20	mg/kg	07.24.18 08:48	
Diesel Range Organics (DRO)	<15.0	1000	940	94	970	97	70-135	3	20	mg/kg	07.24.18 08:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		123		113		70-135	%	07.24.18 08:48
o-Terphenyl	101		107		106		70-135	%	07.24.18 08:48

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 593335

LT Environmental, Inc.

PLU CVX JV BS 016H

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3057652 | Matrix: Soil | Date Prep: 07.24.18
Parent Sample Id: 593218-001 | MS Sample Id: 593218-001 S | MSD Sample Id: 593218-001 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	963	97	971	97	70-135	1	20	mg/kg	07.24.18 09:47	
Diesel Range Organics (DRO)	<15.0	997	998	100	1020	102	70-135	2	20	mg/kg	07.24.18 09:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		115		70-135	%	07.24.18 09:47
o-Terphenyl	103		102		70-135	%	07.24.18 09:47

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058037 | Matrix: Solid | Date Prep: 07.27.18
MB Sample Id: 7659257-1-BLK | LCS Sample Id: 7659257-1-BKS | LCSD Sample Id: 7659257-1-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	0.0986	99	0.0964	96	70-130	2	35	mg/kg	07.27.18 10:22	
Toluene	<0.00200	0.0998	0.0989	99	0.0968	97	70-130	2	35	mg/kg	07.27.18 10:22	
Ethylbenzene	<0.00200	0.0998	0.111	111	0.107	107	70-130	4	35	mg/kg	07.27.18 10:22	
m,p-Xylenes	<0.00399	0.200	0.220	110	0.213	107	70-130	3	35	mg/kg	07.27.18 10:22	
o-Xylene	<0.00200	0.0998	0.107	107	0.104	104	70-130	3	35	mg/kg	07.27.18 10:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		115		110		70-130	%	07.27.18 10:22
4-Bromofluorobenzene	84		84		83		70-130	%	07.27.18 10:22

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3058037 | Matrix: Soil | Date Prep: 07.27.18
Parent Sample Id: 593218-014 | MS Sample Id: 593218-014 S | MSD Sample Id: 593218-014 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	0.101	0.0923	91	0.0853	86	70-130	8	35	mg/kg	07.27.18 11:04	
Toluene	<0.00201	0.101	0.0899	89	0.0819	82	70-130	9	35	mg/kg	07.27.18 11:04	
Ethylbenzene	<0.00201	0.101	0.0959	95	0.0857	86	70-130	11	35	mg/kg	07.27.18 11:04	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.168	84	70-130	12	35	mg/kg	07.27.18 11:04	
o-Xylene	<0.00201	0.101	0.0920	91	0.0827	83	70-130	11	35	mg/kg	07.27.18 11:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		109		70-130	%	07.27.18 11:04
4-Bromofluorobenzene	87		84		70-130	%	07.27.18 11:04

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

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
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 # 593335

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

Project Information

Project Name/Number: PLU CVX JV BS 01614
Project Location: NM 2RP 303
Invoice To: XTO Energy - Kyle Littrell
PO Number:

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	Analytical Information: BTEX 8021 (only BTEX)	TPH (MRO GRO DRO) 8015	Chloride (300.0)	Field Comments
1	FS 04	2' ~~1.5'~~	07/20	8:45	S	1								X	X	X	X	
2	SS 05A	1'	07/20	9:30	S	1								X	X	X	X	
3	SW 10	1'	7/20	12:30	S	1								X	X	X	X	
4	SW 11	1'	7/20	13:50	S	9								X	X	X	X	
5	SW 12	1'	7/20	1350	S	1								X	X	X	X	
6	SW 13	1'	7/20	1500	S	1								X	X	X	X	
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 # 772797467858

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	[signature]	7/20/2018 15:25	[signature]			
2				[signature]	7/23/18 15:20	[signature] 7/24/18 7:30
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: X — Cooler Temp. 0.6 R — 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 v 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: 07/24/2018 11:09:00 AM

Work Order #: 593335

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)?	.6
#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: Shawnee Gomez Date: 07/24/2018

Checklist reviewed by: Jessica Kramer Date: 07/24/2018

Jessica Kramer

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of the north face of the eastern excavation, west of the heater treaters.

Photograph 2: View south-southeast of western excavation on the north side of the well pad.

PLU-CVX-JV-BS #016H
2RP-3103
Photographs Taken: July 19, 2018

ATTACHMENT 4: SOIL SAMPLE LOG

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

Identifier:	Date:
BH01	07/18/2018
Project Name:	**RP Number:**
PLU CVX JV BS 16H	2RP-3103
Logged By: LL	**Method:** Hand Auger
Hole Diameter: 3"	**Total Depth:** 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.153335, -103.8673723
Field Screening: PID, chloride strips
Comments: Hole in liner, auger to estimate extent

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
						0			
11:50	S	4.4 704	1200	N	BH01A	1	1'	caliche	gravel 1/8" average mix - caliche, odor, fully saturated,
12:05	S	>9 72564	4000	N	BH01B	2	2'	caliche	2" rocks + caliche mix, odor, fully saturated, auger refusal
						3			
						4			
						5			
						6			
						7			
						8			
						9			
						10			
						11			
						12			

ENSOLUM

APPENDIX B

Boring Logs (2025)

ENSOLUM

Sample Name: BH01	Date: 02/03/2025	
Site Name: PLU CVX JV BS 016H		
Incident Number: nAB1519556419		
Job Number: 03C1508238		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Nicolas Christakos	Method: Core Drill
Coordinates: 32.153348, -103.867350	Hole Diameter: 2 inch	Total Depth: 4 ft bgs

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
M	<168	1	N/A	BH01	0.5		SW	Tan, caliche, coarse grained with gravel, cohesive, non-plastic, caliche sand
M	<168	0.9	N/A	BH01	1	1	SW	Tan, caliche, coarse grained with gravel, cohesive, non-plastic, caliche sand
						2		
M	280	1.1	N/A	BH01	3	3	SP	Brownish-red, fine grained silty sand with clay, cohesive, low plastcity, caliche sand
M	307	0.1	N/A	BH01	4	4	SW	Tan, caliche, coarse grained with gravel, cohesive, non-plastic, caliche sand
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

Sample Name: BH02	Date: 02/03/2025
Site Name: PLU CVX JV BS 16H	
Incident Number: nAB1519556419	
Job Number: 03C1508238	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Nicolas Christakos	Method: Core Drill
Coordinates: 32.153348, -103.867350	Hole Diameter: 2 inch
	Total Depth: 4 feet bgs

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	201	2.7	N/A	BH02	0.5	0	SP	Tan-white, fine-grained silty sand with gravel, non-cohesive, non-plastic, caliche
M	<168	0.5	N/A	BH02	1	1	SP	Brownish-red, fine-grained silty sand with clay, cohesive, non-plastic, caliche
W	<168	0.5	N/A	BH02	2	2	GW	Tan, fine to coarse grained gravel with sand, cohesive, non-plastic, caliche
M	<168	0.2	N/A	BH02	3	3	SW	Tan, coarse grained sand with gravel, cohesive, non-plastic, caliche
M	<168	0.2	N/A	BH02	4	4	SW	Tan, coarse grained sand with gravel, cohesive, non-plastic, caliche
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ENSOLUM

Sample Name: BH03	Date: 02/03/2025	
Site Name: PLU CVX JV BS 16H		
Incident Number: nAB1519556419		
Job Number: 03C1508238		
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Nicolas Christakos	Method: Core Drill
Coordinates: 32.153348, -103.867350	Hole Diameter: 2 inch	Total Depth: 4 feet bgs

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

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
						0		
D	<168	2.9	N/A	BH03	0.5		SP	Tan, medium grained sand with gravel, non-cohesive, non-plastic, caliche
M	<168	0.5	N/A	BH03	1	1	SP	Tan-brown, medum grained sand with gravel, non-cohesive, non-plastic, caliche sand
M	<168	0.3	N/A	BH03	2	2	SP	Brownish-red, fine grained silty sand with clay, cohesive, low plasticity, caliche sand
W	<168	0.5	N/A	BH03	3	3	SW	Tan, coarse grained sand with gravel, coehsive non-plastic, caliche
W	<168	0.4	N/A	BH03	4	4	SW	Brown, medium-grained sand with gravel, cohesive, non-plastic, caliche
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

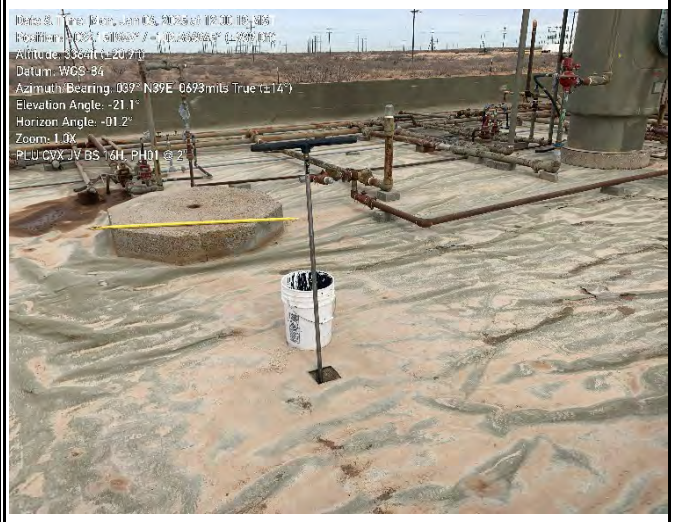
ENSOLUM

APPENDIX C

Photographic Log (2025)

ENSOLUM

Photographic Log
XTO Energy, Inc
POKER LAKE CVX JV BS #016H
Incident Number nAB1519556419



Photograph 1 Date: 1/6/2025
Description: BH01 sampling location
View: North-northeast

Photograph 2 Date: 2/3/2025
Description: BH01 sampling location
View: West

Photograph 3 Date: 2/3/2025
Description: BH02 sampling location
View: North

Photograph 4 Date: 2/3/2025
Description: BH03 sampling location
View: Northeast

ENSOLUM

APPENDIX D

Laboratory Analytical Reports and Chain of Custody Documentation (2025)

CARDINAL Laboratories

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

January 08, 2025

BEN BELILL

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU CVX JV BS #016H

Enclosed are the results of analyses for samples received by the laboratory on 01/07/25 14:00.

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

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

Method EPA 552.2	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

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
BEN BELILL
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	01/07/2025	Sampling Date:	01/06/2025
Reported:	01/08/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO		

Sample ID: BH 01 B 2' (H250044-01)

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	01/07/2025	ND	1.74	87.0	2.00	5.76	
Toluene*	<0.050	0.050	01/07/2025	ND	1.84	91.8	2.00	4.71	
Ethylbenzene*	<0.050	0.050	01/07/2025	ND	1.76	87.8	2.00	4.08	
Total Xylenes*	<0.150	0.150	01/07/2025	ND	5.14	85.6	6.00	4.38	
Total BTEX	<0.300	0.300	01/07/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *94.2 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: KV

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	01/08/2025	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	01/07/2025	ND	195	97.5	200	3.31	
DRO >C10-C28*	<10.0	10.0	01/07/2025	ND	194	96.8	200	1.08	
EXT DRO >C28-C36	<10.0	10.0	01/07/2025	ND					

Surrogate: 1-Chlorooctane *98.3 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.9 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
BS-3	Blank spike recovery outside of lab established statistical limits, but still within method limits. Data is not adversely affected.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1 of 1

Company Name:	Ensolum, LLC	**BILL TO**	
Project Manager:	Katherine Kahn	P.O. #:	
Address:	3122 National Parks Hwy	Company:	XTO Energy Inc.
City:	Carlsbad State: NM Zip: 88220	Attn:	Colton Brown
Phone #:	337 257-8307 Fax #:	Address:	3104 E. Green St.
Project #:	03C1558238 Project Owner: XTO	City:	Carlsbad
Project Name:	PLU CVX JV BS #016H	State: NM Zip:	88220
Project Location:		Phone #:	
Sampler Name:	Connor Whitman	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Sample Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	CHLORIDE
H258044 1	BH01B	2	G	1			/					/		1-6-24	1140	/	/	/

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

Relinquished By:	Date: 1-7-25 Time: 1400	Received By:	
Relinquished By:	Date: Time:	Received By:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.9 Corrected Temp. °C 1.3	Sample Condition Cool: Yes Intact: Yes / No No	CHECKED BY: (Initials) TO

Verbal Result: ☐ Yes ☐ No Add'l Phone #:

All Results are emailed. Please provide Email address:

KK@ResolutionConsultantsLLC.com TMorrissey@ensolum.com, kthomason@ensolum.com

REMARKS: Cost Center: 1140131001 Incident ID: nAB1519556419

Turnaround Time: Standard ☐ Rush ☑ #140

Thermometer ID #140 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

TO: 24h 1/7/25

FORM-006 R 3.2 10/07/21

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

CARDINAL Laboratories

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

February 06, 2025

KATHERINE KHAN

ENSOLUM

3122 NATIONAL PARKS HWY

CARLSBAD, NM 88220

RE: PLU CVX JV BS #016H

Enclosed are the results of analyses for samples received by the laboratory on 02/04/25 14:00.

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

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

Method EPA 552.2	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
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 01 0.5' (H250654-01)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *102 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.1 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 01 1' (H250654-02)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *101 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 01 3' (H250654-03)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**288**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *104 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *99.6 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 01 4' (H250654-04)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**304**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *108 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 02 0.5' (H250654-05)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**256**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *95.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *91.1 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 02 1' (H250654-06)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 02 2' (H250654-07)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *100 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 02 3' (H250654-08)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *107 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *103 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *98.5 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 02 4' (H250654-09)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *110 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *105 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *100 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 03 0.5' (H250654-10)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *99.7 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *94.3 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 03 1' (H250654-11)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *108 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *104 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 03 2' (H250654-12)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *108 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *106 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *102 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 03 3' (H250654-13)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	02/05/2025	ND	416	104	400	7.41	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *107 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *103 %* *49.1-148*

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

ENSOLUM
KATHERINE KHAN
3122 NATIONAL PARKS HWY
CARLSBAD NM, 88220
Fax To:

Received:	02/04/2025	Sampling Date:	02/03/2025
Reported:	02/06/2025	Sampling Type:	Soil
Project Name:	PLU CVX JV BS #016H	Sampling Condition:	Cool & Intact
Project Number:	03C1558238	Sample Received By:	Tamara Oldaker
Project Location:	XTO 32.153395-103.867621		

Sample ID: BH 03 4' (H250654-14)

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	02/05/2025	ND	2.12	106	2.00	1.24	
Toluene*	<0.050	0.050	02/05/2025	ND	2.20	110	2.00	1.30	
Ethylbenzene*	<0.050	0.050	02/05/2025	ND	2.23	112	2.00	1.49	
Total Xylenes*	<0.150	0.150	02/05/2025	ND	6.78	113	6.00	1.39	
Total BTEX	<0.300	0.300	02/05/2025	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	**80.0**	16.0	02/05/2025	ND	432	108	400	0.00	

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	02/05/2025	ND	215	108	200	2.22	
DRO >C10-C28*	<10.0	10.0	02/05/2025	ND	198	98.9	200	1.46	
EXT DRO >C28-C36	<10.0	10.0	02/05/2025	ND					

Surrogate: 1-Chlorooctane *111 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *107 %* *49.1-148*

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Notes and Definitions

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

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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

1 of 2

Company Name: Ensolum, LLC	
Project Manager: Katherine Kahn	
Address: 3122 National Parks Hwy	
City: Carlsbad State: NM Zip: 88220	
Phone #: (303) 319 - 9604 Fax #:	
Project #: 03C1558238 Project Owner:	
Project Name: PLU CVX JV BS 16H	
Project Location: 32.153395, -103.867621	
Sampler Name: Mario Sarkis	

BILL TO

P.O. #:	
Company:	XTO
Attn:	Colton Brown
Address:	3104 E Green St.
City:	Carlsbad
State: NM Zip:	88220
Phone #:	575-988-2390
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Chlorides
H250654																		
1	BH01	0.5	G	1			✓					✓		2/3/25	1035	✓	✓	✓
2	BH01	1	G	1			✓					✓			1043	✓	✓	✓
3	BH01	3	G	1			✓					✓			1106	✓	✓	✓
4	BH01	4	G	1			✓					✓			1135	✓	✓	✓
5	BH02	0.5	G	1			✓					✓			1245	✓	✓	✓
6	BH02	1	G	1			✓					✓			1255	✓	✓	✓
7	BH02	2	G	1			✓					✓			1318	✓	✓	✓
8	BH02	3	G	1			✓					✓			1327	✓	✓	✓
9	BH02	4	G	1			✓					✓			1401	✓	✓	✓
10	BH03	0.5	G	1			✓					✓			1423	✓	✓	✓

Relinquished By:	Date: 2-4-25	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 1400		All Results are emailed. Please provide Email address:
Relinquished By:	Date:	Received By:	KK@ResolutionConsultantsLLC.com / msarkis@ensolum.com / kthompson@ensolum.com
	Time:		REMARKS: Incident #: nAB1519556419
			Cost Center: 1140131001

Delivered By: (Circle One)	Observed Temp. °C -0.3	Sample Condition Cool Intact	CHECKED BY: (Initials)	Turnaround Time: Standard ☐ Rush ☑
Sampler - UPS - Bus - Other:	Corrected Temp. °C 0.0	☑ Yes ☑ Yes ☐ No ☐ No		Thermometer ID #113 #140 Correction Factor -0.5°C +0.3°C 48-hr

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

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 Kahn	P.O. #:
Address: 3122 National Parks Hwy	Company: XTO
City: Carlsbad State: NM Zip: 88220	Attn: Colton Brown
Phone #: (303) 319 - 9604 Fax #:	Address: 3104 E Green St.
Project #: 03C1558238 Project Owner:	City: Carlsbad
Project Name: PLU CVX JV BS 16H	State: NM Zip: 88220
Project Location: 32.153395, -103.867621	Phone #: 575-988-2390
Sampler Name: Mario Sarkis	Fax #:

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Chlorides
H250654																		
11	BH03	1	G	1			✓					✓		2/3/25	1430	✓	✓	✓
12	BH03	2	G	1			✓					✓			1446	✓	✓	✓
13	BH03	3	G	1			✓					✓			1457	✓	✓	✓
14	BH03	4	G	1			✓					✓			1520	✓	✓	✓

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

Relinquished By:	Date: 3-4-25 Time: 1400	Received By:	Verbal Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: KK@ResolutionConsultantsLLC.com / msarkis@ensolum.com / kthompson@ensolum.com
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C -0.3 Corrected Temp. °C 0.0	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)

REMARKS: Incident #: nAB1519556419

Cost Center: 1140131001

Turnaround Time: Standard ☐ Rush ☑ 48-hr

Thermometer ID #112 #140 Correction Factor -0.5°C +0.3°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

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

FORM-006 R 3.2 10/07/21

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

General Information
Phone: (505) 629-6116

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

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

QUESTIONS

Action 445681

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445681
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1519556419**
Incident Name	**NAB1519556419 POKER LAKE CVX JV BS #016H @ 30-015-40581**
Incident Type	**Produced Water Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-40581] POKER LAKE CVX JV BS #016H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	POKER LAKE CVX JV BS #016H
Date Release Discovered	06/30/2015
Surface Owner	Federal

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water 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	*Not answered.*
Produced Water Released (bbls) Details	Cause: Equipment Failure | Flow Line - Production | Produced Water | Released: 9 BBL | Recovered: 2 BBL | Lost: 7 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
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: 445681
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**No**
Reasons why this would be considered a submission for a notification of a major release	*Unavailable.*
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/26/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445681
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 100 and 500 (ft.)
What method was used to determine the depth to ground water	Attached Document
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between ½ and 1 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Greater than 5 (mi.)
Any other fresh water well or spring	Greater than 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Between 1 and 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	16200
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	365
GRO+DRO (EPA SW-846 Method 8015M)	330
BTEX (EPA SW-846 Method 8021B or 8260B)	0.3
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	07/19/2018
On what date will (or did) the final sampling or liner inspection occur	02/03/2025
On what date will (or was) the remediation complete(d)	07/20/2025
What is the estimated surface area (in square feet) that will be reclaimed	1620
What is the estimated volume (in cubic yards) that will be reclaimed	377
What is the estimated surface area (in square feet) that will be remediated	1620
What is the estimated volume (in cubic yards) that will be remediated	377
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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Santa Fe, NM 87505

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445681
	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	LEA LAND LANDFILL [fEEM0112342028]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/26/2025
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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Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

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

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

QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 445681
	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
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	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**426403**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**02/07/2025**
What was the (estimated) number of samples that were to be gathered	**25**
What was the sampling surface area in square feet	**5000**

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	1620
What was the total volume (cubic yards) remediated	377
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	1240
What was the total volume (in cubic yards) reclaimed	320
Summarize any additional remediation activities not included by answers (above)	"Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the June 30, 2015, release of produced water. The confirmed depth to groundwater is greater than 100 feet bgs within 0.5 miles of the Site as presented in the 2023 Addendum. Current analytical results from delineation samples BH01 through BH03 reported COC concentrations in compliance with the Closure Criteria and reclamation requirement indicating natural attenuation remediated impacts previously observed at the Site at BH01. All excavation and delineation samples report COC concentrations below Closure Criteria. No additional remediation is required at the Site. Following the delineation activities conducted in 2025, the estimated volume of waste-containing soil present beneath the lined operational equipment as defined by sample locations SW08 and BH01 through BH03 is less than 57 cubic yards. As discussed in the Closure Request, the excavation immediately adjacent to SW08 vertically delineates chloride concentrations to 600 mg/kg at 10 feet bgs. The presence of the waste-containing soil underlying the lined containment does not cause an imminent risk to human health, the environment, or groundwater. XTO will remediate this soil reporting COC concentrations exceeding reclamation requirement but below Closure Criteria prior to 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: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 03/26/2025

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 445681
	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: 445681
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	Remediation closure approved.	3/26/2025
amaxwell	A reclamation report will not be accepted until reclamation of the release area, including areas reasonably needed for production or drilling activities, is complete and meet the requirements of 19.15.29.13 NMAC. Areas not reasonably needed for production or drilling activities will still need to be reclaimed and revegetated as early as practicable.	3/26/2025
amaxwell	The reclamation report will need to include: Executive Summary of the reclamation activities; Scaled Site Map including sampling locations; Analytical results including, but not limited to, results showing that any remaining impacts meet the reclamation standards and results to prove the backfill is non-waste containing; At least one (1) representative 5-point composite sample will need to be collected from the backfill material that will be used for the reclamation of the top four feet of the excavation. The OCD reserves the right to request additional sampling if needed; pictures of the backfilled areas showing that the area is back, as nearly as practical, to the original condition or the final land use and maintain those areas to control dust and minimize erosion to the extent practical; pictures of the top layer, which is either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater; and a revegetation plan.	3/26/2025