ENSOLUM

February 27, 2025

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

Re: Closure Request Addendum
PLU CVX JV BS 015H
Incident Number NAB1821157574
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request Addedum* (*Addendum*) as a follow-up to the *Deferral Request* dated December 6, 2019 and the *Closure Request* dated June 23, 2023. This *Addendum* provides clarifications regarding the excavation and soil sampling activities completed at the PLU CVX JV BS 015H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the *Closure Request*. In the denial, NMOCD requested confirmation that the location of the excavation and sample PH05 are correct in the previous submittals. Based on the clarification of remediation and sampling activities described below, XTO is submitting this *Addendum* and requesting no further action and closure for Incident Number NAB1821157574.

RELEASE BACKGROUND

The release location listed on the NMOCD portal is the location of the PLU CVX JV BS 015H well, not the location of the release and Site. The Site is located in Units A and D, Sections 23 and 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.207958°, -103.842569°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM; Figure 1).

On July 12, 2018, internal corrosion of a flow line caused the release of approximately 2 barrels (bbls) of oil and 8 bbls of produced water. The flow line is located along the north side of Twin Wells Road, and the release impacted the surface of the road. In response to the release, the flow line was clamped, and a vacuum truck recovered approximately 0.5 bbls of oil and 1.5 bbls of produced water. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 26, 2018. The release was assigned Remediation Permit Number (RP) Number 2RP-4880 and Incident Number NAB1821157574.

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 that reportable releases that occurred prior to or near 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.

As discussed in the December 6, 2019 *Deferral Request*, delineation and excavation activities were conducted at the Site between December 2018 and September 2019 to address impacts resulting from

the July 12, 2018 crude oil and produced water release. Thirteen potholes (PH01 through PH13) were advanced to terminal depths ranging from 1.5 feet to 12 feet below ground surface (bgs) north and south of Twin Wells Road to assess the extent of soil impacts both laterally and vertically. Impacted soil was excavated south of the flow line and north of Twin Wells Road based on visual observations and field screening. The excavation that originated at the release point measured approximately 820 square feet in area and ranged in depth from 8.5 feet to 10 feet bgs. A total of approximately 365 cubic yards of impacted soil were removed from the excavation and disposed of properly offsite. Composite soil samples SW01 through SW08 were collected from the sidewalls of the excavation at depths ranging from ground surface to 8.5 feet bgs. Composite soil samples FS01 through FS03 were collected from the floor of the excavation from depths ranging from 8.5 feet to 10 feet bgs. Floor sample FS02 collected at 10 feet bgs reported total petroleum hydrocarbons (TPH)-gasoline range organics (GRO)/ TPH-diesel range organics (DRO) and TPH above NMOCD Table I Closure Criteria (Closure Criteria) so the location was over excavated, and an additional floor sample (FS04) was submitted from 20.5 feet bgs. Impacted soil was excavated to the extent possible; however, residual impacted soil above Closure Criteria was left in place at three sampling locations for compliance with XTO safety policy regarding earth-moving activities within two feet of active pipelines and roads. This policy was enforced where impacted soil was identified within 2 feet of Twin Wells Road in excavation sidewall sample SW03 and within 2 feet of an active gas line in excavation sidewall samples SW06 and SW07. The impacted soil left in-place was laterally and vertically delineated to below the Closure Criteria. The *Deferral Request* is attached as Appendix A.

On March 23, 2023, NMOCD denied the *Deferral Request* for Incident Number nAB1821157574 for the following reasons:

- *OCD is unable to determine the location of the release. GPS coordinates through the report place the release location and test pit locations on the pad of the well site.*
- *Sample PH05B returned analytical results above the closure and reclamation standards. Remediation excavation appears to have been completed on the opposite side of the road based on the locations of the test pits and confirmation samples that are plotted on the figures.*
- *This release did not occur on a lined, bermed or otherwise contained exploration, development, production or storage site and it must meet the standards of Table I of 19.15.29.12 NMAC or other applicable remediation standards and restore and reclaim the area pursuant to 19.15.29.13 NMAC.*

On June 23, 2023, a *Closure Request* was submitted in response to the *Deferral Request* denial. The correct GPS coordinates for the release location were provided in the *Closure Request* and in an updated Form C-141. However, it appears that the NMOCD portal was not corrected. As summarized in the *Closure Request*, soil sample analytical results from 2018 and 2019 were reviewed, and excavation sidewall samples SW03, SW06, and SW07 were identified with TPH-GRO/TPH-DRO and TPH concentrations exceeding Closure Criteria. Additionally, delineation sample PH05B reported TPH greater than 100 milligrams per kilogram (mg/kg) in the top four feet, and excavation sidewall sample SW08 reported chloride greater than 600 mg/kg in the top four feet. Ensolum personnel returned to the Site to assess current soil impacts by resampling SW03, SW06, SW07, SW08, and PH05B locations. Laboratory analytical results for soil samples SW03A, SW06A/SW06B, SW07A/SW07B, SW08A, and PH05B indicated that all chemicals of concern (COC) concentrations were compliant with the Closure Criteria and the reclamation requirement in samples collected from the top four feet. Figure 2 illustrates the delineation soil sample locations, and Figure 3 illustrates the excavation extent and excavation soil sample locations. Table 1 summarizes the historic analytical results for the Site. Based on the results of soil sampling activities completed during June 2023, closure was requested for Incident Number nAB1821157574. The *Closure Request* is attached as Appendix B.

On July 14, 2023, NMOCD denied the *Closure Request* for Incident Number nAB1821157574 for the following reasons:

- *The last application (200020) was rejected based on the following reasons: OCD unable to determine location of release. GPS coordinates through the report place the release location and test pit locations on the pad of the well site. PH05B returned analytical results above the closure and reclamation standards. Remediation excavation appears to have been completed on the opposite side of the road based on the locations of the test pits and confirmation samples that are plotted on the figures. This release did not occur on a lined, bermed or otherwise contained exploration, development, production or storage site and it must meet the standards of Table I of 19.15.29.12 NMAC or other applicable remediation standards and restore and reclaim the area pursuant to 19.15.29.13 NMAC. The GPS coordinates have been updated but the location of the excavation and PH05 has not been explained or updated. Please confirm in the report, and include a statement in the report, that the location of the excavation and PH05 is correct as it does not make sense that an excavation would be performed on the northern side of the road when the contamination was encountered on the southern side of the road. Submit a complete report though the OCD Permitting website by 10/14/2023.*

CLOSURE CRITERIA

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture areas 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.

EXCAVATION AND SOIL SAMPLING LOCATION CLARIFICATION

As discussed above, the impacted soil was excavated south of the release point on the north side of Twin Wells Road based on visual staining and field screening. The staining from the release is visible in the photo included on page 1 of the Photographic Log in the *Deferral Request* (Appendix A). The excavation originated south of the release point and flowed west/southwest following the release extent as pictured in the photograph included in Appendix C. The excavation location was correctly illustrated on the north side of Twin Wells Road in the *Closure Request* (Figure 3). The photograph included on page 2 of the photolog in the *Deferral Request* and in Appendix C of this *Addendum* depicts the excavation facing east, and Twin Wells Road (not paved) is visible to the south of the excavation. The final dimensions of the excavation were based on visual observations, field screening, confirmation sampling results and compliance with XTO safety policy regarding earth-moving activities within two feet of active pipelines and roads.

Samples were submitted from potholes advanced north and south of Twin Wells Road to define the lateral and vertical extent of the impacts. The boring log for PH05 was submitted with the *Deferral*

Request (Appendix A) and did not report staining, odor, or high levels of chloride and volatile organic compounds (VOC) during field screening. PH05 was advanced south of Twin Wells Road so compliance was anticipated at this location; however, TPH was reported above reclamation requirement in the soil sample collected from PH05 at 2 feet bgs. The impacts were not addressed during the 2019 excavation activities, as the NMOCD typically did not require excavation of waste-containing soil in 2019. The location of PH05 is accurately illustrated on the south side of Twin Wells Road in the *Closure Request* (Figure 2).

In 2023, following NMOCD's review of the *Deferral Request* and subsequent application of the reclamation requirement, Ensolum resampled location PH05 at 2 feet bgs in addition to four sidewall locations to verify the presence or absence of impacts. Analytical results reported COC concentrations in compliance with the Closure Criteria and reclamation requirement indicating natural attenuation remediated impacts previously observed at the Site. No additional remediation is required at the Site. Photographs of the 2019 and 2023 Site conditions are included in Appendix C.

CLOSURE REQUEST

Excavation, delineation, and soil sampling activities were completed at the Site to address the impacted soil resulting from the July 12, 2018, crude oil and produced water release. Based on the additional soil sampling activities completed during June 2023 and laboratory analytical results for all final excavation and delineation soil samples compliant with the Closure Criteria and the reclamation requirement in soil samples collected from the top four feet, no further remediation is required. Additionally, it should be noted that the heavily trafficked Twin Wells Road was paved with asphalt between 2019 and 2023.

Initial response efforts, excavation of impacted soil, and natural attenuation have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs within 0.5 miles of the Site and no other sensitive receptors were identified near the release extent. XTO believes the remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number nAB1821157574.

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 (2018/2019 and 2023)
Figure 3	Excavation Soil Sample Locations (2018/2019 and 2023)
Table 1	Soil Sample Analytical Results (2018/2019 and 2023)
Appendix A	December 6, 2019 *Deferral Request*
Appendix B	June 23, 2023 *Closure Request*
Appendix C	Photographic Log

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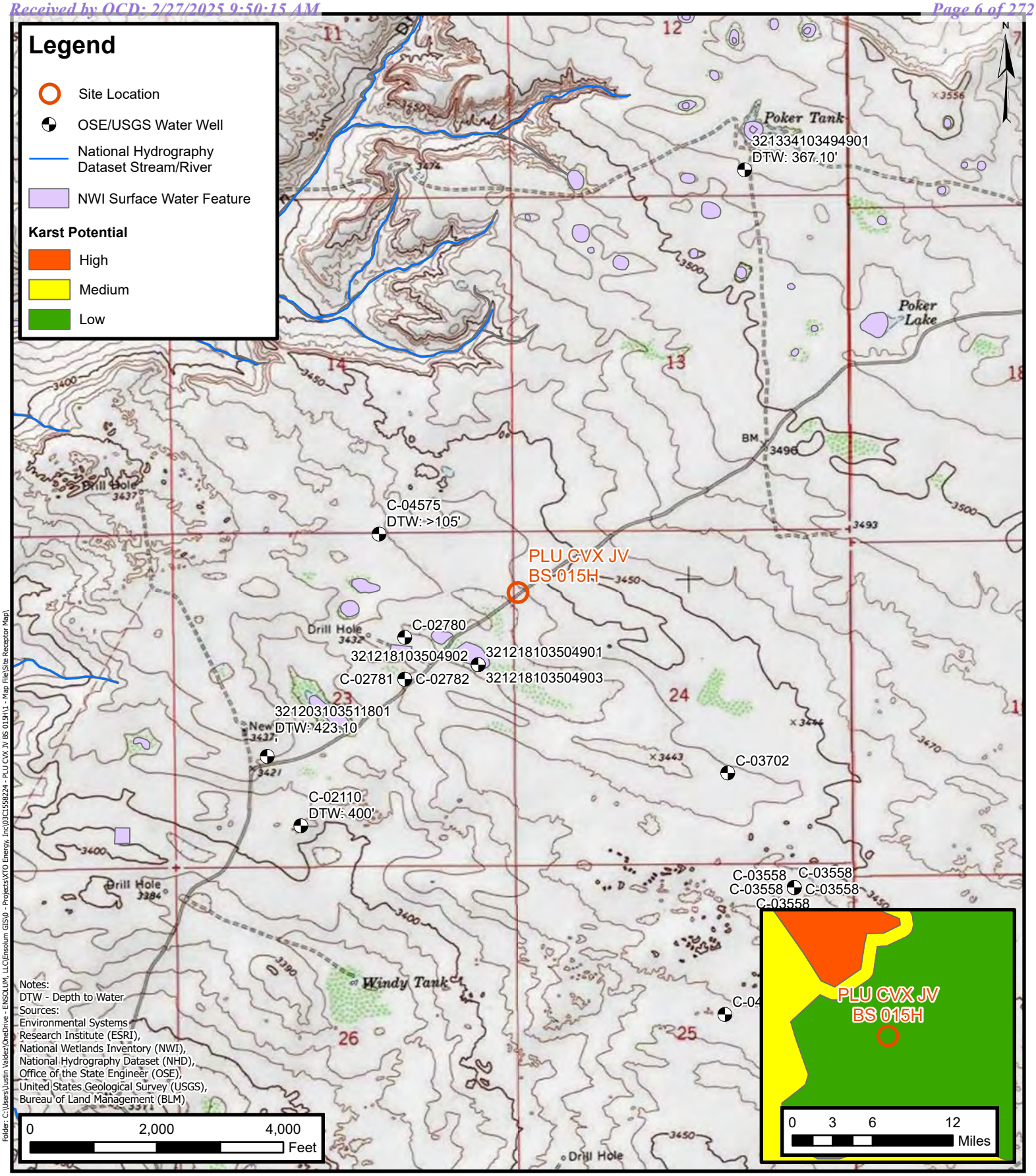
FIGURES



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Site Receptor Map

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE 1

Folder: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1558224 - PLU CVX JV BS 015H\1 - Map File\Delineation Soil Sample Locations Map\

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Delineation Soil Sample Locations

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East,
Eddy County, New Mexico

FIGURE 2

Folder: C:\Users\Peter Rodriguez\OneDrive - ENSOLUM, LLC\Desktop\PAR_GIS\File Path Structure\3 - Carlsbad\XTO Energy, Inc\03C1558224 - PLU CVX JV BS 015H\1 - Map File\Excavation Soil Sample Locations Map\

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Excavation Soil Sample Locations

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East,
Eddy County, New Mexico

FIGURE 3

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TABLE

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU CVX JV BS 015H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
PH01A*	12/5/2018	2	<0.00200	0.00308	<15.0	<15.0	<15.0	<15.0	<15.0	37.5
PH01B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.1
PH02A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
PH02B*	12/5/2018	3	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
PH03A*	12/5/2018	2	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
PH03B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH04A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.5
PH04B*	12/5/2018	3	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	85.0
PH05A*	12/5/2018	1.5	<0.00199	<0.00199	<15.0	37.5	<15.0	37.5	37.5	103
PH05B*	12/5/2018	2	<0.00202	<0.00202	<15.0	183	106	183	**289**	69.4
BH05B*	6/6/2023	2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	36.8
PH06A*	12/5/2018	1	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	53.5
PH06B*	12/5/2018	1.5	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	59.4
PH07A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	19.5
PH07B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.0
PH08A*	12/5/2018	1	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	174
PH08B*	12/5/2018	1.5	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	329
PH09*	8/28/2019	2	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	184
PH09A*	8/28/2019	3	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	205
PH10*	8/28/2019	2	<0.00201	<0.00201	<24.9	<24.9	<24.9	<24.9	<24.9	232
PH10A*	8/28/2019	3	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	158
PH11*	8/28/2019	1	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	49.5
PH11A*	8/28/2019	2	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	52.6
PH12*	8/28/2019	1	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	46.0
PH12A*	8/28/2019	3	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	91.8
PH12B	9/13/2019	6	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	39.4
PH12C	9/13/2019	10	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	25.3
PH13*	9/26/2019	1	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	84.1
PH13A	9/26/2019	4	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	89.6
PH13B	9/26/2019	12	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	40.0

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU CVX JV BS 015H
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*	9/9/2019	0-8.5	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	227
SW02*	9/9/2019	0-8.5	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	558
SW03*	9/9/2019	0 8.5	<0.0992	4.95	288	1,060	<25.0	**1,350**	**1,350**	498
SW03A*	6/6/2023	0-4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	74.1
SW04*	9/9/2019	0-8.5	<0.0000099	<0.0000099	<25.0	<25.0	<25.0	<25.0	<25.0	107
SW05*	9/9/2019	0-8.5	<0.00101	0.00542	<25.0	<25.0	<25.0	<25.0	<25.0	94.5
SW06*	9/9/2019	0 8.5	0.246	25.5	1,050	3,000	<25.0	**4,050**	**4,050**	**1,340**
SW06A*	6/6/2023	0-4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	127
SW06B	6/15/2023	4-8	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	95.7
SW07*	9/9/2019	0 8.5	<0.101	12.7	446	1,630	<25.0	**2,080**	**2,080**	**1,180**
SW07A*	6/6/2023	0-4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	108
SW07B	6/15/2023	4-8	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	97.5
SW08*	9/9/2019	0 8.5	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	**969**
SW08A*	6/6/2023	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	71.0
FS01	9/9/2019	8.5	<0.00100	0.0176	<25.1	49	<25.1	49.0	49.0	2,450
~~FS02~~	~~9/9/2019~~	~~10~~	~~<0.100~~	~~12.1~~	~~629~~	~~2,120~~	~~<25.1~~	~~**2,750**~~	~~**2,750**~~	~~16.9~~
FS03	9/9/2019	9	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	<9.86
FS04	9/9/2019	20.5	<0.000996	<0.000996	<25.1	<25.1	<25.1	<25.1	<25.1	10.2

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during 2018/2019 excavation activities

Grey text indicates 2018/2019 soil sample that was re-sampled/replaced by 2023 soil sample.

* -indicates sample was collected in the top 4 feet of an area to be reclaimed after remediation is complete

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APPENDIX A

December 6, 2019 *Deferral Request*

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

December 6, 2019

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

RE: Deferral Request
PLU CVX JV BS 015H
Remediation Permit Number 2RP-4880
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment, soil sampling, and excavation activities at the PLU CVX JV BS 015H (Site) in Unit A and D, Section 23 and 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The location referenced on the Initial C-141 is the location of the well pad not the location of the flow line release. The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (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) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

RELEASE BACKGROUND

On July 12, 2018, internal corrosion of a flow line caused the release of approximately 2 barrels a (bbls) of oil and 8 bbls of produced water. The flow line ran alongside Twin Wells road, the release impacted the surface of the road. The flow line was clamped, and a vacuum truck recovered approximately 0.5 bbls of oil and 1.5 bbls of produced water. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on July 26, 2018, and was assigned Remediation Permit (RP) Number 2RP-4880 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the NMAC. 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 321203103511801, located approximately 3,803 feet southwest of the Site. The water well has a depth to groundwater of approximately 423 feet bgs and a total depth of 474 feet bgs. Ground surface elevation at the water well location is 3,423 feet above mean sea level (AMSL), which is approximately 7 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash approximately 2,974 feet North of 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. The Site is located in a low potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On July 12, 2018, LTE personnel inspected the Site to evaluate the release area during initial spill response activities. The release extent was mapped utilizing a handheld Global Positing System (GPS) unit and is depicted on Figure 2.

Between December 2018 and September 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities as indicated by visual observations, field screening activities, and the documented release area.

Potholes were advanced via backhoe at 13 locations within and around the release extent to assess the lateral and vertical extent of impacted soil. Potholes PH01 through PH13 were

advanced to depths ranging from 1.5 feet to 12 feet bgs. Delineation soil samples were collected from each pothole at depths ranging from 1 foot to 12 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole delineation soil sample locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by visual observations, field screening results, and potholing activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth ranging from 8.5 feet to 20.5 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW08 were collected from the sidewalls of the excavation from depths ranging from ground surface to 8.5 feet bgs. Composite soil samples FS01 through FS04 were collected from the floor of the excavation from depths ranging from 8.5 feet to 20.5 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 3.

The delineation and excavation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

The excavation measured approximately 820 square feet in area with a depth of 8.5 feet to 20.5 feet bgs. A total of approximately 365 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH13 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the analytical results, the lateral and vertical extent of impacted soil was defined.

Laboratory analytical results for excavation sidewall samples SW01, SW02, SW04, SW05, and SW08, and excavation floor samples FS01, FS03, and FS04 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results indicated that TPH and/or GRO/DRO concentrations in excavation sidewall samples SW03, SW06, and SW07, and excavation floor sample FS02 exceeded the Closure Criteria. Additional soil was removed from the floor of the excavation, and subsequent floor sample FS04 was compliant with the Closure Criteria. Further excavation of impacted soil beyond sidewall sample SW03 was limited by the heavily trafficked Twin Wells road. Further excavation of impacted soil beyond sidewall samples SW06 and SW07 was limited by an active gas line. XTO safety policy restricts soil disturbing activities to a 2 foot radius of active roads and pipelines. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of roads and pipelines. This policy was enforced where impacted soil was identified within 2 feet of Twin Wells road in excavation sidewall sample SW03 and within 2 feet of an active gas line in excavation sidewall samples SW06 and SW07.

The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

DEFERRAL REQUEST

A total of approximately 365 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of active roads and pipelines. Impacted soil was excavated to the extent possible, and laboratory analytical results for excavation sidewall samples SW03, SW06, and SW07, collected from the final excavation extent, indicated that soil with TPH and/or GRO/DRO concentrations exceeding the Closure Criteria was left in place within 2 feet of an active road or pipeline. The impacted soil remaining in place is delineated vertically and laterally by excavation soil samples SW01, SW02, SW04, SW05, SW08, FS01, FS03, and FS04, collected from the sidewalls and floor of the final excavation extent, and delineation soil samples collected from potholes PH12 and PH13. An estimated 200 cubic yards of impacted soil remains in place, assuming a maximum 12 foot depth based on soil samples FS01, FS03, FS04, PH12C, and PH13B, collected from depths of 8.5 feet to 20.5 feet bgs, that were compliant with the Closure Criteria.

XTO requests to complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The saturated soil has been excavated, and impacted soil remaining in-place is beneath an active road that will not be revegetated in the foreseeable future.

XTO requests deferral of final remediation for RP Number 2RP-4880. Upon approval of this deferral 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.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-4880)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

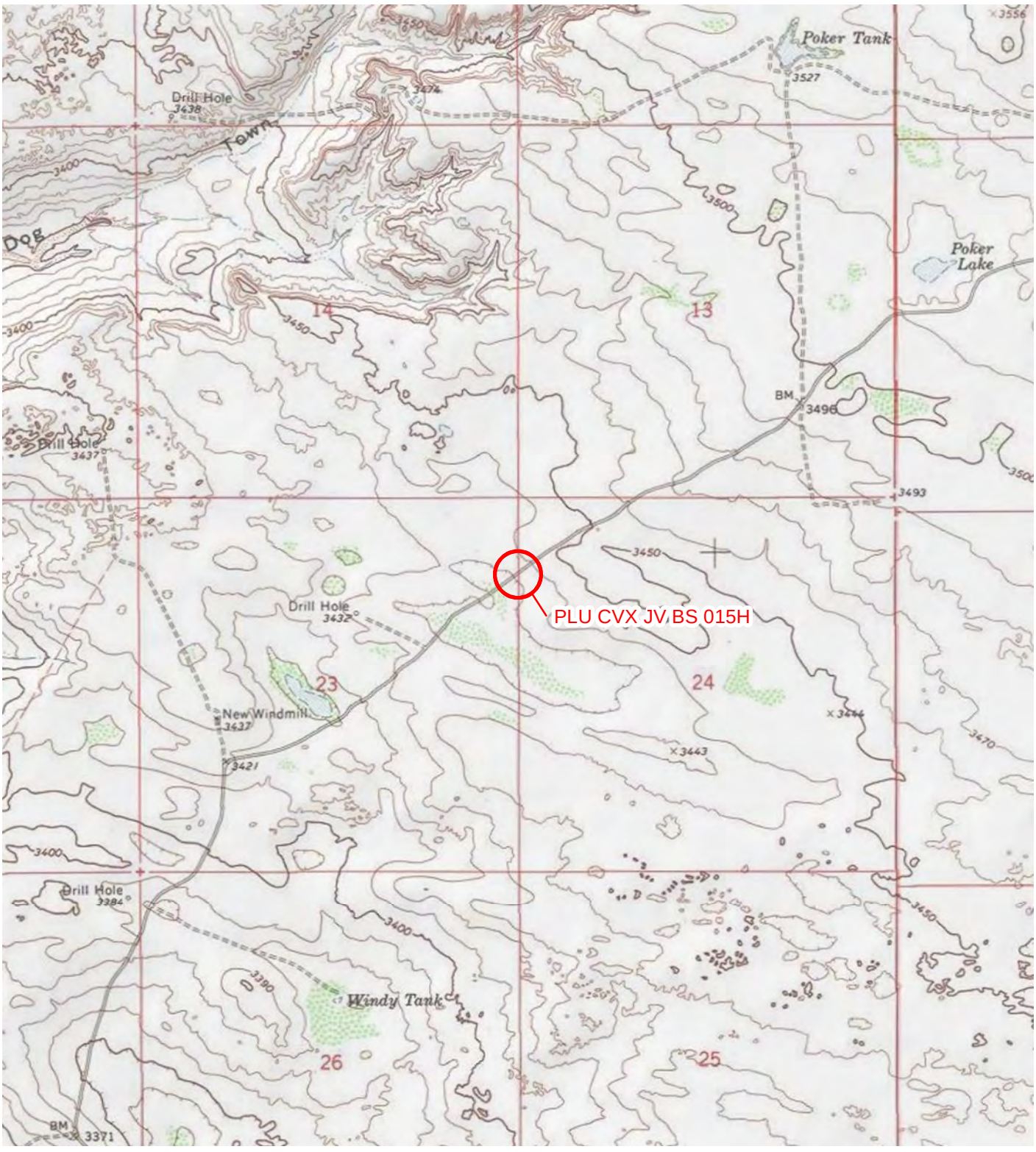


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-4880

FIGURE 1
SITE LOCATION MAP
PLU CVX JV BS 015H
UNIT A & D SEC 23 & 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918136_PLU CVX JV BS 015H_4880\012918136_FIG01_SL_2018_4880.mxd

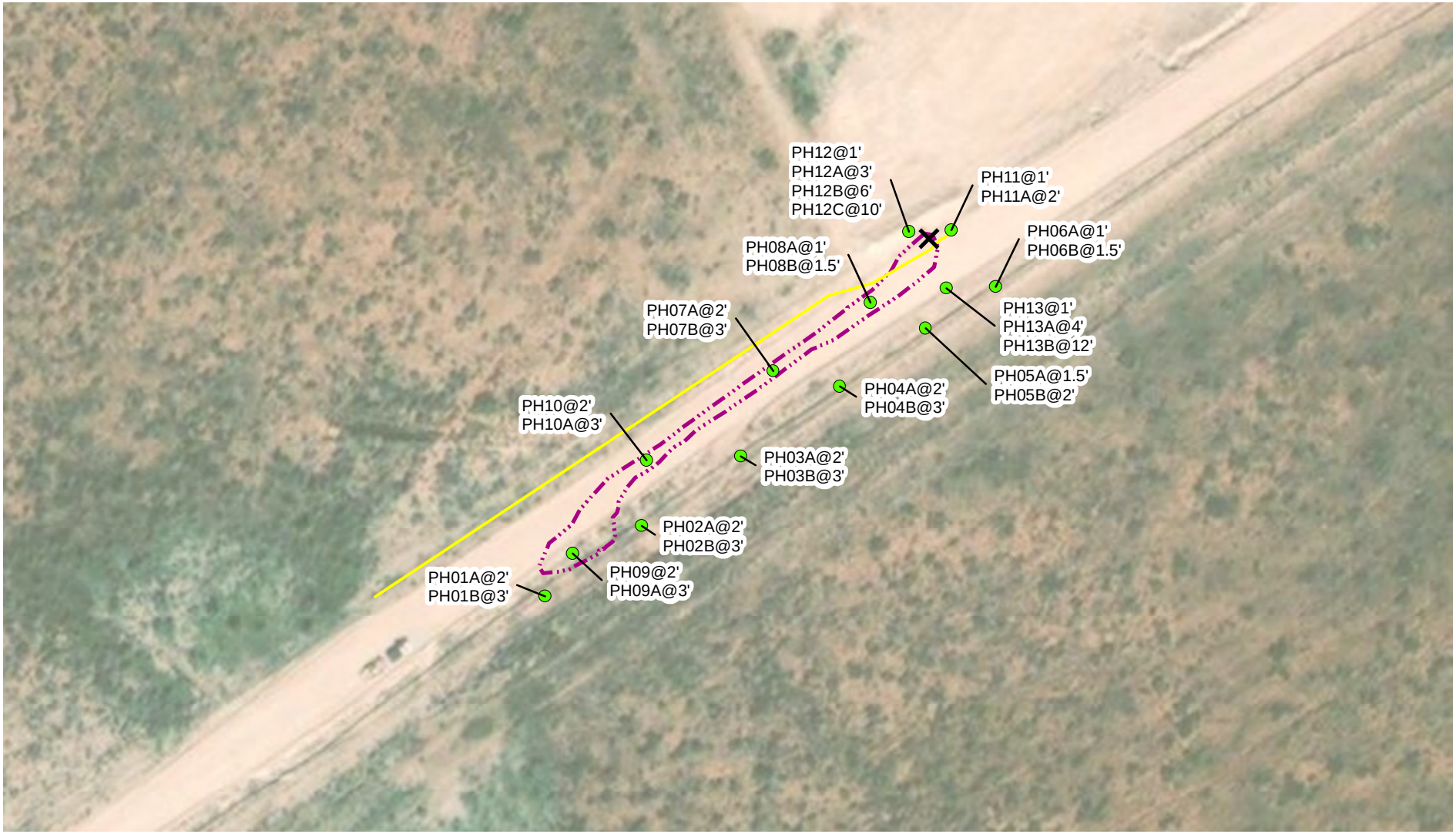


IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- RELEASE EXTENT

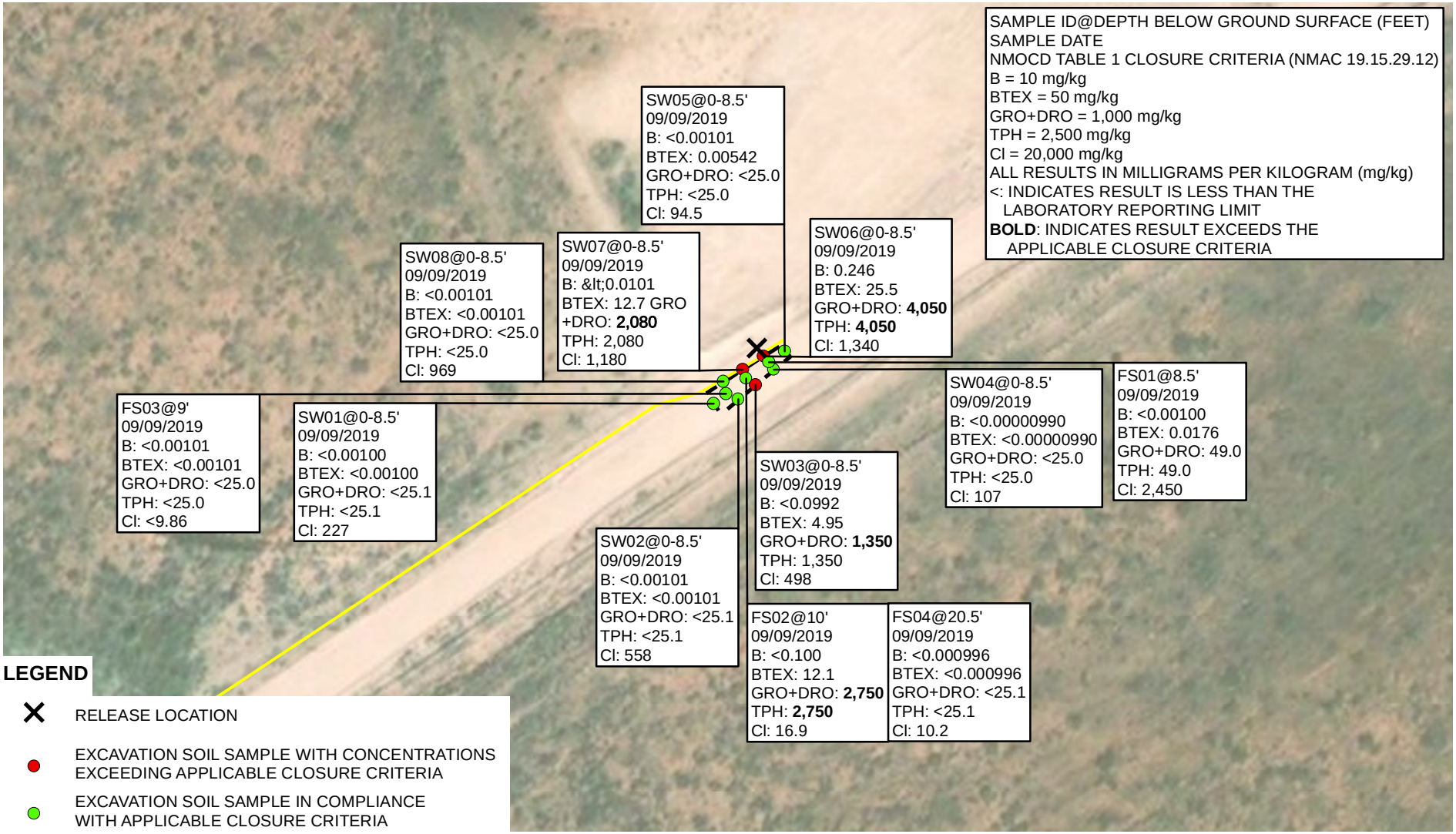
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-4880

0 100 200
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
PLU CVX JV BS 015H
UNIT A & D SEC 23 & 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918136_PLU CVX JV BS 015H_4880\012918136_FIG03_DELINEATION_4880.mxd



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-4880

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
PLU CVX JV BS 015H
UNIT A & D SEC 23 & 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918136_PLU CVX JV BS 015H_4880\012918136_FIG04_EXCAVATION_4880.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

PLU CVX JV BS 015H
REMEDIATION PERMIT NUMBER 2RP-4880
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH01A	2	12/05/2018	<0.00200	<0.00200	<0.00200	0.00308	0.00308	<15.0	<15.0	<15.0	<15.0	<15.0	37.5
PH01B	3	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.1
PH02A	2	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
PH02B	3	12/05/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
PH03A	2	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
PH03B	3	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH04A	2	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.5
PH04B	3	12/05/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	85.0
PH05A	1.5	12/05/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	37.5	<15.0	37.5	37.5	103
PH05B	2	12/05/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	183	106	183	289	69.4
PH06A	1	12/05/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	53.5
PH06B	1.5	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	59.4
PH07A	2	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	19.5
PH07B	3	12/05/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.0
PH08A	1	12/05/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	174
PH08B	1.5	12/05/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	329
PH09	2	08/28/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	184
PH09A	3	08/28/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	205
PH10	2	08/28/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<24.9	<24.9	<24.9	<24.9	<24.9	232
PH10A	3	08/28/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	158
PH11	1	08/28/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	49.5
PH11A	2	08/28/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	52.6
PH12	1	08/28/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	46.0
PH12A	3	08/28/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	91.8
PH12B	6	09/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	39.4
PH12C	10	09/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	25.3
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

TABLE 1
SOIL ANALYTICAL RESULTS

PLU CVX JV BS 015H
REMEDIATION PERMIT NUMBER 2RP-4880
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH13	1	09/26/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	84.1
PH13A	4	09/26/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	89.6
PH13B	12	09/26/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	40.0
SW01	0-8.5	09/09/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	227
SW02	0-8.5	09/09/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	558
SW03	0-8.5	09/09/2019	<0.0992	0.621	0.487	3.84	4.95	288	1,060	<25.0	**1,350**	1,350	498
SW04	0-8.5	09/09/2019	<0.0000099	<0.0000099	<0.0000099	<0.0000099	<0.0000099	<25.0	<25.0	<25.0	<25.0	<25.0	107
SW05	0-8.5	09/09/2019	<0.00101	0.00114	<0.00101	0.00428	0.00542	<25.0	<25.0	<25.0	<25.0	<25.0	94.5
SW06	0-8.5	09/09/2019	0.246	4.09	3.10	18.1	25.5	1,050	3,000	<25.0	**4,050**	**4,050**	1,340
SW07	0-8.5	09/09/2019	<0.101	1.36	1.37	9.94	12.7	446	1,630	<25.0	**2,080**	2,080	1,180
SW08	0-8.5	09/09/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	969
FS01	8.5	09/09/2019	<0.00100	0.00140	0.00163	0.0145	0.0176	<25.1	49.0	<25.1	49.0	49.0	2,450
FS02	10	09/09/2019	<0.100	0.895	1.60	9.65	12.1	629	2,120	<25.1	**2,750**	**2,750**	16.9
FS03	9	09/09/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	<9.86
FS04	20.5	09/09/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<25.1	<25.1	<25.1	<25.1	<25.1	10.2
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

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4880)

OCD Rec'd: 07/26/18

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 April 3, 2017

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

Release Notification and Corrective Action

nAB1821157524 fEDCD 2107137

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy	Contact: Kyle Littrell
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No: 432-221-7331
Facility Name: PLU CVX JV BS 015H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No: 30-015-40395

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	14	24S	30E	50	South	2360	East	Eddy

Latitude 32.210649 **Longitude** -103.850825 NAD83

NATURE OF RELEASE

Type of Release Oil and produced water	Volume of Release 2bbl oil, 8bbl produced water	Volume Recovered .5bbl oil, 1.5bbl produced water
Source of Release Flow line	Date and Hour of Occurrence 7/12/2018, AM	Date and Hour of Discovery 7/12/2018, 9:00 AM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour: N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
Release was due to internal corrosion on flowline. Line was clamped and well returned to production.

Describe Area Affected and Cleanup Action Taken.*
Release occurred alongside lease road. Vacuum truck was dispatched and recovered 2bbl of standing fluid. An environmental contractor has been retained to assist with remediation efforts.

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

Signature:	OIL CONSERVATION DIVISION
Printed Name: Kyle Littrell	Approved by Environmental Specialist: Maria Pruett
Title: Environmental Coordinator	Approval Date: 7/27/18 Expiration Date: N/A
E-mail Address: Kyle_Littrell@xtoenergy.com	Conditions of Approval: See attached Attached ☒
Date: 7/26/2018 Phone: 432-221-7331	

* 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-4880
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4880
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.210649 Longitude -103.850825
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: PLU CVX JV BS 015H	Site Type: Production Well Facility
Date Release Discovered: 7/12/2018	API# *(if applicable):* 30-015-40395

Unit Letter	Section	Township	Range	County
A & D	23 & 24	24S	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): 2	Volume Recovered (bbls): 0.5
☒ Produced Water	Volume Released (bbls): 8	Volume Recovered (bbls): 1.5
	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
Release was due to internal corrosion on flowline. Line was clamped and well returned to production.
Release occurred alongside lease road.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4880
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was less than 25 bbls.
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:
N/A

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 Supervisor

Signature: Date: 12-6-2019

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-4880
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4880
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 Supervisor

Signature: Date: 12-6-2019

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-4880
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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 Supervisor

Signature: Date: 12-6-2019

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

OCD Only

Received by: Date:

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Date:

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH01	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method: Backhoe
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA / Total Depth: 3 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	0.1		PH01A	2			
	< 192	0.1		PH01B	3			Total Depth 3 feet bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH02	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method: Backhoe
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA / Total Depth: 3 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	0.2		PH02A	2			
	< 192	0.1		PH02B	3			Total Depth 3 feet bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH03	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method: Backhoe
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA / Total Depth: 3 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	0.1		PH03A	2			
	< 192	0.1		PH03B	3			Total Depth 3 feet bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH04	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method:
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA / Total Depth: 3 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	0.2		PH04A	2			
	< 192	0.4		PH04B	3			Caliche Total Depth 3 feet bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH05	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method: Backhoe
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA
		Total Depth: 2 feet

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	2.3		PH05A				
	< 192	6.5		PH05B	2			
								Total Depth 2 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH06	12/5/2018
Project Name:	RP Number:
PLU BS 15H	2RP-4880

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: AA	Method: Backkhoe

Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA	Total Depth: 1.5 feet

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
	< 192	1.3		PH06A	1			
	< 192	4.6		PH06B				
					2			Total Depth 1.5 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: PH07	Date: 12/5/2018
	Project Name: PLU BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: AA	Method: Backhoe
Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA / Total Depth: 3 feet
Comments:		

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
					1			
	< 192	0.2		PH07A	2			
	< 192	0.1		PH07B	3			Total Depth 3 feet bgs
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH08	12/5/2018
Project Name:	RP Number:
PLU BS 15H	2RP-4880

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: AA	Method: Backhoe

Lat/Long: 32.210649, -103.850825	Field Screening: PID	Hole Diameter: NA	Total Depth: 1.5 feet

Comments:

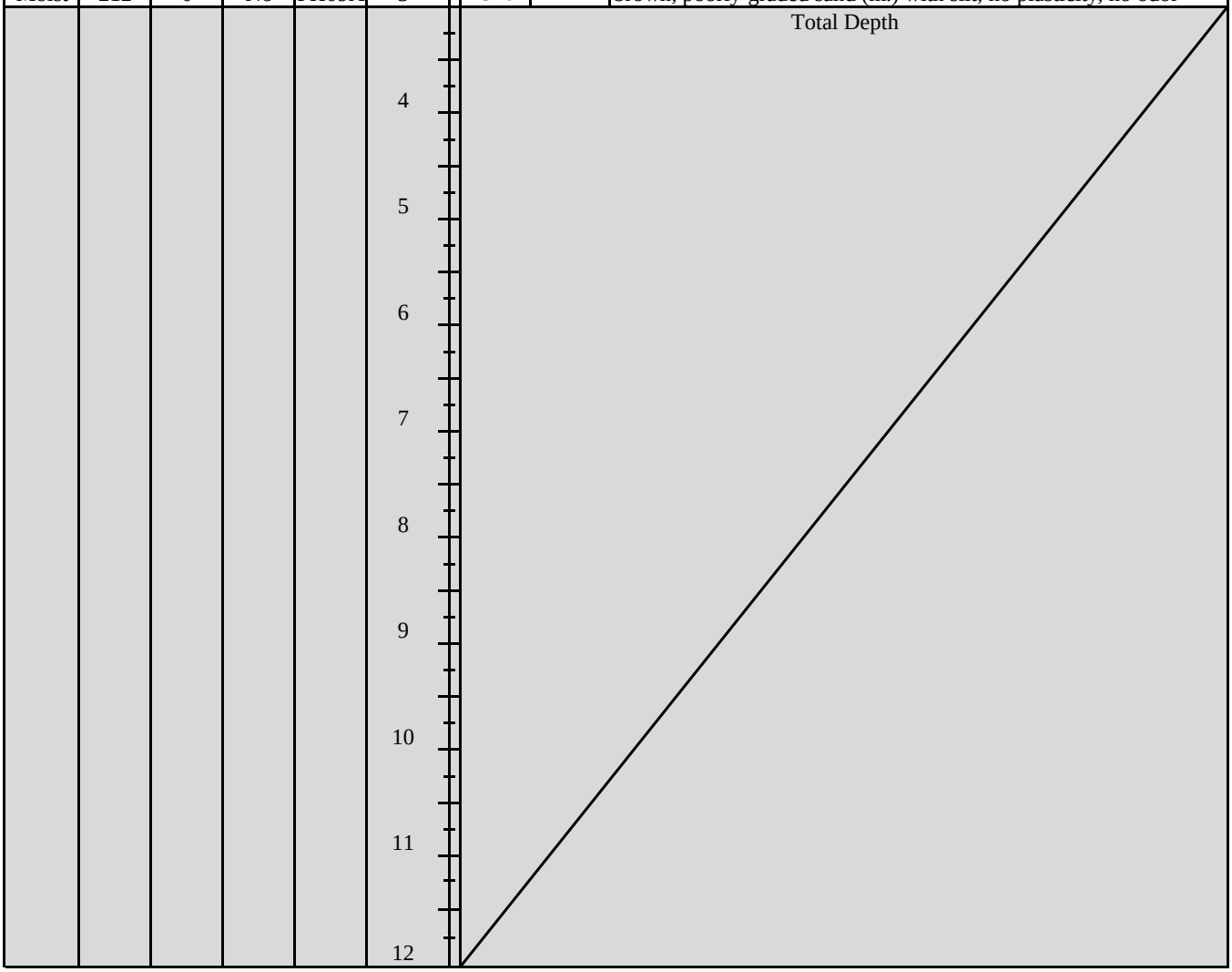
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			SILTY SAND, red-brown, no odor
								Hard rock
	< 192	9.0		PH08A	1			
	< 192	3.1		PH08B				
					2			Total Depth 1.5 feet bgs
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier: PH09	Date: 8/28/19	
Project Name: PLU CVX JV BS 15H	RP Number: 2RP-4880	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Anna Byers	Method: Track Hoe
Lat/Long: Refer to Collector	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A / Total Depth: 3 ft

Comments: Chloride tests performed with 1 part soil and 4 parts distilled water dilution
ND: Not Detected - Below detection limit on Chloride test strip

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Moist	ND	0	No	PH09	1	1 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	212	0	No		2	2 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	212	0	No	PH09A	3	3 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor

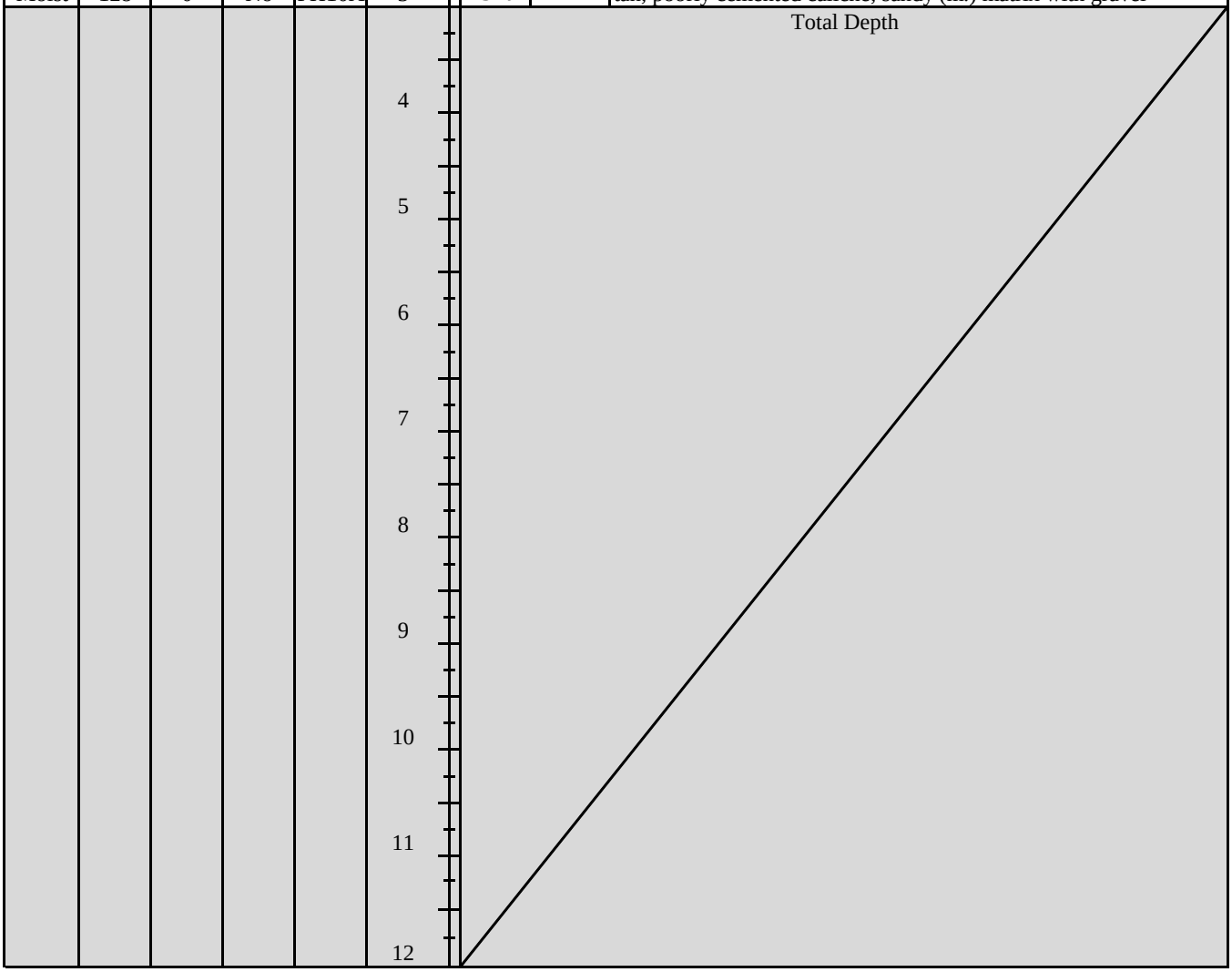


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH10	Date: 8/28/19	
Project Name: PLU CVX JV BS 15H	RP Number: 2RP-4880	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Anna Byers	Method: Track Hoe
Lat/Long: Refer to Collector	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 3 ft

Comments: Chloride tests performed with 1 part soil and 4 parts distilled water dilution
ND: Not Detected - Below detection limit on Chloride test strip

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Moist	396	0	No		1	1 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	396	0	No	PH10	2	2 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	128	0	No	PH10A	3	3 ft	SP-SM	tan, poorly cemented caliche; sandy (m.) matrix with gravel

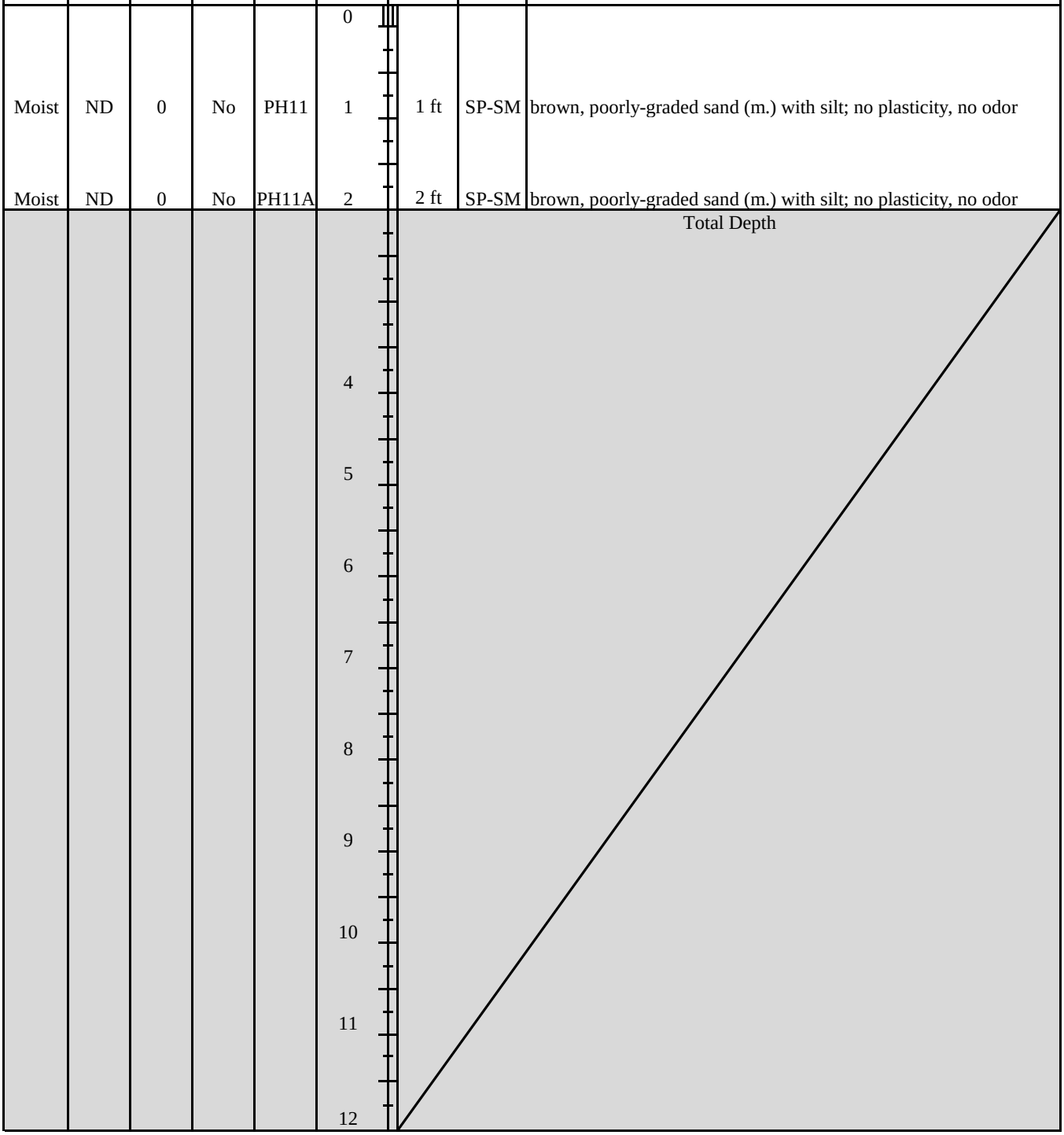


LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier: PH11	Date: 8/28/19	
Project Name: PLU CVX JV BS 15H	RP Number: 2RP-4880	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: Anna Byers	Method: Track Hoe
Lat/Long: Refer to Collector	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 2 ft

Comments: Chloride tests performed with 1 part soil and 4 parts distilled water dilution
ND: Not Detected - Below detection limit on Chloride test strip

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Moist	ND	0	No	PH11	1	1 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	ND	0	No	PH11A	2	2 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor



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

		Identifier: PH12	Date: 8/28/19; 9/13/19
		Project Name: PLU CVX JV BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Track Hoe
Lat/Long: Refer to Collector	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 10 ft

Comments: Chloride tests performed with 1 part soil and 4 parts distilled water dilution
ND: Not Detected - Below detection limit on Chloride test strip

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
Moist	ND	0	No	PH12	1	1 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	ND	0	No		2	2 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Moist	ND	0	No	PH12A	3	3 ft	SP-SM	brown, poorly-graded sand (m.) with silt; no plasticity, no odor
Dry	ND	83.1	No		4	4 ft	Caliche	tan, well-cemented sandy (m.) matrix with gravel; odor, no plasticity
					5			
Dry	ND	185.8	No	PH12B	6	6 ft	Caliche	tan, moderately-cemented sandy (m.) matrix with gravel; odor, no plasticity
					7			
Dry	ND	39.3	No		8	8 ft	Caliche	tan, moderately-cemented sandy (m.) matrix with gravel; odor, no plasticity
					9			
Dry	ND	41.2	No	PH12C	10	10 ft	SP	light brown/tan poorly graded sand (m.); no plasticity, no odor
					11			Total Depth
					12			

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

		Identifier: PH13	Date: 9/26/19
		Project Name: PLU CVX JV BS 15H	RP Number: 2RP-4880
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Track Hoe
Lat/Long: Refer to Collector	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 12 ft

Comments: Chloride tests performed with 1 part soil and 4 parts distilled water dilution
ND: Not Detected - Below detection limit on Chloride test strip

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
Dry	ND	40.1	No	PH13	1	1 ft	Caliche	Road surface caliche; compact, well-graded sandy (m.) matrix with gravel
					2		Caliche	Natural in-situ caliche; tan moderately-cemented, no plasticity, well-graded sandy (m.) matrix with gravel
					3			
Dry	ND	8.9	No	PH13A	4	4 ft	Caliche	caliche; tan moderately-cemented, no plasticity, well-graded sandy (m.) matrix with gravel
					5			
					6			
					7			
Dry	ND	89.4	No	~	8	8 ft	Caliche	caliche; tan moderately-cemented, no plasticity, well-graded sandy (m.) matrix with gravel
					9			
					10		SP	light brown/tan poorly-graded sand (m.); no plasticity, no odor
					11			
Dry	ND	127.5	No	PH13B	12	12 ft	SP	light brown/tan poorly-graded sand (m.); no plasticity, no odor

ATTACHMENT 3: PHOTOGRAPHIC LOG

View of the release area at the release source.

Project: 012918136	XTO Energy, Inc. PLU CVX JV BS 15H	LTE Advancing Opportunity
July 12, 2018	Photographic Log	

East facing view of the open excavation.

Project: 012918136	XTO Energy, Inc. PLU CVX JV BS 15H	LTE Advancing Opportunity
September 9, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 607930

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU BS 15H

13-DEC-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

13-DEC-18

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

Reference: XENCO Report No(s): **607930**
PLU BS 15H
Project Address: Eddy County

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) 607930. 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. 607930 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 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01A	S	12-05-18 10:00	2 ft	607930-001
PH01B	S	12-05-18 10:05	3 ft	607930-002
PH02A	S	12-05-18 10:45	2 ft	607930-003
PH02B	S	12-05-18 10:50	3 ft	607930-004
PH03A	S	12-05-18 11:10	2 ft	607930-005
PH03B	S	12-05-18 11:15	3 ft	607930-006
PH04A	S	12-05-18 11:30	2 ft	607930-007
PH04B	S	12-05-18 11:35	3 ft	607930-008
PH05A	S	12-05-18 12:00	1.5 ft	607930-009
PH05B	S	12-05-18 12:10	2 ft	607930-010
PH06A	S	12-05-18 12:20	1 ft	607930-011
PH06B	S	12-05-18 12:30	1.5 ft	607930-012
PH07A	S	12-05-18 13:15	2 ft	607930-013
PH07B	S	12-05-18 13:20	3 ft	607930-014
PH08A	S	12-05-18 13:45	1 ft	607930-015
PH08B	S	12-05-18 13:55	1.5 ft	607930-016

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU BS 15H

Project ID:
Work Order Number(s): *607930*

Report Date: *13-DEC-18*
Date Received: *12/07/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3072484 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3072490 Inorganic Anions by EPA 300
Lab Sample ID 607930-016 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.
Samples in the analytical batch are: 607930-007, -008, -009, -010, -011, -012, -013, -014, -015, -016.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3072726 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 607930

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 15H

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Dec-07-18 11:30 am
Report Date: 13-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	607930-001		607930-002		607930-003		607930-004		607930-005		607930-006	
	Field Id:	PH01A		PH01B		PH02A		PH02B		PH03A		PH03B	
	Depth:	2- ft		3- ft		2- ft		3- ft		2- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-18 10:00		Dec-05-18 10:05		Dec-05-18 10:45		Dec-05-18 10:50		Dec-05-18 11:10		Dec-05-18 11:15	
BTEX by EPA 8021B	***Extracted:***	Dec-11-18 12:30		Dec-11-18 12:30		Dec-11-18 12:30		Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20	
	Analyzed:	Dec-11-18 18:46		Dec-11-18 19:05		Dec-11-18 20:19		Dec-12-18 13:11		Dec-12-18 13:30		Dec-12-18 13:49	
	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	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		0.00308	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		0.00308	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		0.00308	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
TPH by SW8015 Mod	***Extracted:***	Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00	
	Analyzed:	Dec-09-18 21:24		Dec-09-18 22:19		Dec-09-18 22:38		Dec-09-18 22:57		Dec-09-18 23:16		Dec-09-18 23:35	
	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	<14.9	14.9	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 607930

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 15H

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Dec-07-18 11:30 am
Report Date: 13-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	607930-001		607930-002		607930-003		607930-004		607930-005		607930-006	
	Field Id:	PH01A		PH01B		PH02A		PH02B		PH03A		PH03B	
	Depth:	2- ft		3- ft		2- ft		3- ft		2- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-18 10:00		Dec-05-18 10:05		Dec-05-18 10:45		Dec-05-18 10:50		Dec-05-18 11:10		Dec-05-18 11:15	
Inorganic Anions by EPA 300	***Extracted:***	Dec-10-18 09:00		Dec-10-18 09:00		Dec-10-18 09:00		Dec-10-18 09:00		Dec-10-18 09:00		Dec-10-18 09:00	
	Analyzed:	Dec-10-18 13:00		Dec-10-18 13:07		Dec-10-18 13:13		Dec-10-18 11:54		Dec-10-18 13:19		Dec-10-18 13:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		37.5	4.95	26.1	4.99	<4.95	4.95	<4.95	4.95	<4.98	4.98	<4.96	4.96

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 607930

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 15H

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Dec-07-18 11:30 am
Report Date: 13-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	607930-007		607930-008		607930-009		607930-010		607930-011		607930-012	
	Field Id:	PH04A		PH04B		PH05A		PH05B		PH06A		PH06B	
	Depth:	2- ft		3- ft		1.5- ft		2- ft		1- ft		1.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-05-18 11:30		Dec-05-18 11:35		Dec-05-18 12:00		Dec-05-18 12:10		Dec-05-18 12:20		Dec-05-18 12:30	
BTEX by EPA 8021B	***Extracted:***	Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20	
	Analyzed:	Dec-12-18 14:08		Dec-12-18 14:27		Dec-12-18 14:46		Dec-12-18 15:05		Dec-13-18 11:31		Dec-13-18 11:51	
	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	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00402	0.00402	<0.00398	0.00398	<0.00403	0.00403	<0.00402	0.00402	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00201	0.00201	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00	
	Analyzed:	Dec-10-18 14:05		Dec-10-18 14:23		Dec-10-18 14:29		Dec-10-18 14:36		Dec-10-18 14:42		Dec-10-18 15:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10.5	4.97	85.0	5.00	103	5.00	69.4	4.96	53.5	4.99	59.4	4.98
TPH by SW8015 Mod	***Extracted:***	Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00	
	Analyzed:	Dec-09-18 23:54		Dec-10-18 00:13		Dec-10-18 00:32		Dec-10-18 00:51		Dec-10-18 01:49		Dec-10-18 02:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	37.5	15.0	183	15.0	<15.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	106	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	37.5	15.0	289	15.0	<15.0	15.0	<14.9	14.9

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 607930

LT Environmental, Inc., Arvada, CO

Project Name: PLU BS 15H

Project Id:
Contact: Adrian Baker
Project Location: Eddy County

Date Received in Lab: Fri Dec-07-18 11:30 am
Report Date: 13-DEC-18
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	607930-013		607930-014		607930-015		607930-016							
	Field Id:	PH07A		PH07B		PH08A		PH08B							
	Depth:	2- ft		3- ft		1- ft		1.5- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	Dec-05-18 13:15		Dec-05-18 13:20		Dec-05-18 13:45		Dec-05-18 13:55							
BTEX by EPA 8021B	*Extracted:*	Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20		Dec-12-18 09:20							
	Analyzed:	Dec-13-18 12:10		Dec-13-18 12:29		Dec-13-18 12:48		Dec-13-18 13:07							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
m,p-Xylenes		<0.00400	0.00400	<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402						
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201						
Inorganic Anions by EPA 300	*Extracted:*	Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00		Dec-10-18 12:00							
	Analyzed:	Dec-10-18 15:09		Dec-10-18 15:15		Dec-10-18 15:21		Dec-10-18 15:34							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		19.5	4.95	32.0	4.99	174	4.96	329	4.99						
TPH by SW8015 Mod	*Extracted:*	Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00		Dec-08-18 08:00							
	Analyzed:	Dec-10-18 02:28		Dec-10-18 02:47		Dec-10-18 03:07		Dec-10-18 03:26							
	Units/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						
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0						
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0						
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0						

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id: **PH01A** Matrix: Soil Date Received:12.07.18 11.30

Lab Sample Id: 607930-001 Date Collected: 12.05.18 10.00 Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.10.18 09.00 Basis: Wet Weight

Seq Number: 3072251

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**37.5**	4.95	mg/kg	12.10.18 13.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.08.18 08.00 Basis: Wet Weight

Seq Number: 3072272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 21.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.09.18 21.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.09.18 21.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.09.18 21.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.09.18 21.24	
o-Terphenyl	84-15-1	102	%	70-135	12.09.18 21.24	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-001	Date Collected:	12.05.18 10.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.11.18 12.30	Basis:	Wet Weight
Seq Number:	3072484				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.11.18 18.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.11.18 18.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.11.18 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.11.18 18.46	U	1
o-Xylene	95-47-6	**0.00308**	0.00200	mg/kg	12.11.18 18.46		1
Total Xylenes	1330-20-7	**0.00308**	0.00200	mg/kg	12.11.18 18.46		1
Total BTEX		**0.00308**	0.00200	mg/kg	12.11.18 18.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.11.18 18.46	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.11.18 18.46	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-002	Date Collected:	12.05.18 10.05	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 09.00	Basis:	Wet Weight
Seq Number:	3072251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.1**	4.99	mg/kg	12.10.18 13.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 22.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.09.18 22.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.09.18 22.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.09.18 22.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.09.18 22.19	
o-Terphenyl	84-15-1	89	%	70-135	12.09.18 22.19	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-002	Date Collected:	12.05.18 10.05	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.11.18 12.30	Basis:	Wet Weight
Seq Number:	3072484				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.11.18 19.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.11.18 19.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.11.18 19.05	
4-Bromofluorobenzene	460-00-4	86	%	70-130	12.11.18 19.05	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-003	Date Collected:	12.05.18 10.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 09.00	Basis:	Wet Weight
Seq Number:	3072251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	12.10.18 13.13	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.09.18 22.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.09.18 22.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.09.18 22.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.09.18 22.38	
o-Terphenyl	84-15-1	88	%	70-135	12.09.18 22.38	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-003	Date Collected:	12.05.18 10.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.11.18 12.30	Basis:	Wet Weight
Seq Number:	3072484				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.11.18 20.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.11.18 20.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.11.18 20.19	
4-Bromofluorobenzene	460-00-4	87	%	70-130	12.11.18 20.19	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-004	Date Collected:	12.05.18 10.50	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 09.00	Basis:	Wet Weight
Seq Number:	3072251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	12.10.18 11.54	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.09.18 22.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.09.18 22.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.09.18 22.57	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.09.18 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	12.09.18 22.57	
o-Terphenyl	84-15-1	89	%	70-135	12.09.18 22.57	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-004	Date Collected:	12.05.18 10.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.18 13.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.12.18 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.12.18 13.11	
4-Bromofluorobenzene	460-00-4	86	%	70-130	12.12.18 13.11	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-005	Date Collected:	12.05.18 11.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 09.00	Basis:	Wet Weight
Seq Number:	3072251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	12.10.18 13.19	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.09.18 23.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.09.18 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.09.18 23.16	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.09.18 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.09.18 23.16	
o-Terphenyl	84-15-1	90	%	70-135	12.09.18 23.16	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-005	Date Collected:	12.05.18 11.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.12.18 13.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.18 13.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.12.18 13.30	
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.12.18 13.30	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-006	Date Collected:	12.05.18 11.15	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 09.00	Basis:	Wet Weight
Seq Number:	3072251				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	12.10.18 13.25	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 23.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.09.18 23.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.09.18 23.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.09.18 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.09.18 23.35	
o-Terphenyl	84-15-1	87	%	70-135	12.09.18 23.35	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-006	Date Collected:	12.05.18 11.15	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.12.18 13.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.18 13.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.12.18 13.49	
4-Bromofluorobenzene	460-00-4	85	%	70-130	12.12.18 13.49	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-007	Date Collected:	12.05.18 11.30	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.5**	4.97	mg/kg	12.10.18 14.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.09.18 23.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.09.18 23.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.09.18 23.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.09.18 23.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	12.09.18 23.54	
o-Terphenyl	84-15-1	93	%	70-135	12.09.18 23.54	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-007	Date Collected:	12.05.18 11.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.12.18 14.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.12.18 14.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	12.12.18 14.08	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.12.18 14.08	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-008	Date Collected:	12.05.18 11.35	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**85.0**	5.00	mg/kg	12.10.18 14.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 00.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 00.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 00.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	12.10.18 00.13	
o-Terphenyl	84-15-1	88	%	70-135	12.10.18 00.13	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH04B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-008	Date Collected:	12.05.18 11.35	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.12.18 14.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.12.18 14.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.12.18 14.27	
4-Bromofluorobenzene	460-00-4	83	%	70-130	12.12.18 14.27	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id: **PH05A** Matrix: Soil Date Received:12.07.18 11.30

Lab Sample Id: 607930-009 Date Collected: 12.05.18 12.00 Sample Depth: 1.5 ft

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.10.18 12.00 Basis: Wet Weight

Seq Number: 3072490

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**103**	5.00	mg/kg	12.10.18 14.29		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.08.18 08.00 Basis: Wet Weight

Seq Number: 3072272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 00.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	**37.5**	15.0	mg/kg	12.10.18 00.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 00.32	U	1
Total TPH	PHC635	**37.5**	15.0	mg/kg	12.10.18 00.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	12.10.18 00.32	
o-Terphenyl	84-15-1	82	%	70-135	12.10.18 00.32	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-009	Date Collected:	12.05.18 12.00	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.12.18 14.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.12.18 14.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	12.12.18 14.46	
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.12.18 14.46	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH05B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-010	Date Collected:	12.05.18 12.10	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.4**	4.96	mg/kg	12.10.18 14.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	**183**	15.0	mg/kg	12.10.18 00.51		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**106**	15.0	mg/kg	12.10.18 00.51		1
Total TPH	PHC635	**289**	15.0	mg/kg	12.10.18 00.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	12.10.18 00.51	
o-Terphenyl	84-15-1	84	%	70-135	12.10.18 00.51	

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LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH05B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-010	Date Collected:	12.05.18 12.10	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.12.18 15.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.12.18 15.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	12.12.18 15.05	
1,4-Difluorobenzene	540-36-3	111	%	70-130	12.12.18 15.05	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-011	Date Collected:	12.05.18 12.20	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.5**	4.99	mg/kg	12.10.18 14.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 01.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 01.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.10.18 01.49	
o-Terphenyl	84-15-1	83	%	70-135	12.10.18 01.49	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-011	Date Collected:	12.05.18 12.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.13.18 11.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.13.18 11.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	70-130	12.13.18 11.31	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.13.18 11.31	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH06B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-012	Date Collected:	12.05.18 12.30	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**59.4**	4.98	mg/kg	12.10.18 15.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.10.18 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.10.18 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.10.18 02.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.10.18 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	12.10.18 02.09	
o-Terphenyl	84-15-1	80	%	70-135	12.10.18 02.09	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH06B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-012	Date Collected:	12.05.18 12.30	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.13.18 11.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.18 11.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	12.13.18 11.51	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.13.18 11.51	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-013	Date Collected:	12.05.18 13.15	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.5**	4.95	mg/kg	12.10.18 15.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 02.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 02.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	12.10.18 02.28	
o-Terphenyl	84-15-1	83	%	70-135	12.10.18 02.28	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-013	Date Collected:	12.05.18 13.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.13.18 12.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.18 12.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.13.18 12.10	
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.13.18 12.10	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH07B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-014	Date Collected:	12.05.18 13.20	Sample Depth:	3 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.0**	4.99	mg/kg	12.10.18 15.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 02.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 02.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 02.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 02.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.10.18 02.47	
o-Terphenyl	84-15-1	85	%	70-135	12.10.18 02.47	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH07B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-014	Date Collected:	12.05.18 13.20	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.13.18 12.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.13.18 12.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	12.13.18 12.29	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.13.18 12.29	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-015	Date Collected:	12.05.18 13.45	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**174**	4.96	mg/kg	12.10.18 15.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 03.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 03.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 03.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 03.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	12.10.18 03.07	
o-Terphenyl	84-15-1	83	%	70-135	12.10.18 03.07	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-015	Date Collected:	12.05.18 13.45	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.13.18 12.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.13.18 12.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.13.18 12.48	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.13.18 12.48	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH08B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-016	Date Collected:	12.05.18 13.55	Sample Depth:	1.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.10.18 12.00	Basis:	Wet Weight
Seq Number:	3072490				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**329**	4.99	mg/kg	12.10.18 15.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.08.18 08.00	Basis:	Wet Weight
Seq Number:	3072272				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.10.18 03.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.10.18 03.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.10.18 03.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.10.18 03.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	12.10.18 03.26	
o-Terphenyl	84-15-1	88	%	70-135	12.10.18 03.26	

Certificate of Analytical Results 607930

LT Environmental, Inc., Arvada, CO

PLU BS 15H

Sample Id:	**PH08B**	Matrix:	Soil	Date Received:	12.07.18 11.30
Lab Sample Id:	607930-016	Date Collected:	12.05.18 13.55	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.12.18 09.20	Basis:	Wet Weight
Seq Number:	3072726				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.13.18 13.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.13.18 13.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.13.18 13.07	
4-Bromofluorobenzene	460-00-4	91	%	70-130	12.13.18 13.07	

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 607930

LT Environmental, Inc.

PLU BS 15H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072251 Matrix: Solid Date Prep: 12.10.18
MB Sample Id: 7667712-1-BLK LCS Sample Id: 7667712-1-BKS LCSD Sample Id: 7667712-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	251	100	90-110	0	20	mg/kg	12.10.18 09:39	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072490 Matrix: Solid Date Prep: 12.10.18
MB Sample Id: 7667714-1-BLK LCS Sample Id: 7667714-1-BKS LCSD Sample Id: 7667714-1-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	248	99	274	110	90-110	10	20	mg/kg	12.10.18 13:52	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072251 Matrix: Soil Date Prep: 12.10.18
Parent Sample Id: 607879-003 MS Sample Id: 607879-003 S MSD Sample Id: 607879-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	499	249	732	94	745	99	90-110	2	20	mg/kg	12.10.18 09:58	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072251 Matrix: Soil Date Prep: 12.10.18
Parent Sample Id: 607930-004 MS Sample Id: 607930-004 S MSD Sample Id: 607930-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.850	248	236	95	241	97	90-110	2	20	mg/kg	12.10.18 12:00	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072490 Matrix: Soil Date Prep: 12.10.18
Parent Sample Id: 607930-007 MS Sample Id: 607930-007 S MSD Sample Id: 607930-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	249	248	95	264	102	90-110	6	20	mg/kg	12.10.18 14:11	

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

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

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

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

QC Summary 607930

LT Environmental, Inc.

PLU BS 15H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3072490 Matrix: Soil Date Prep: 12.10.18
Parent Sample Id: 607930-016 MS Sample Id: 607930-016 S MSD Sample Id: 607930-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	329	250	546	87	563	94	90-110	3	20	mg/kg	12.10.18 15:40	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3072272 Matrix: Solid Date Prep: 12.08.18
MB Sample Id: 7667658-1-BLK LCS Sample Id: 7667658-1-BKS LCSD Sample Id: 7667658-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	936	94	976	98	70-135	4	20	mg/kg	12.09.18 20:46	
Diesel Range Organics (DRO)	<8.13	1000	998	100	1040	104	70-135	4	20	mg/kg	12.09.18 20:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		114		122		70-135	%	12.09.18 20:46
o-Terphenyl	113		101		110		70-135	%	12.09.18 20:46

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3072272 Matrix: Soil Date Prep: 12.08.18
Parent Sample Id: 607930-001 MS Sample Id: 607930-001 S MSD Sample Id: 607930-001 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)	<7.99	999	1020	102	897	90	70-135	13	20	mg/kg	12.09.18 21:42	
Diesel Range Organics (DRO)	<8.12	999	1060	106	978	98	70-135	8	20	mg/kg	12.09.18 21:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		119		70-135	%	12.09.18 21:42
o-Terphenyl	104		94		70-135	%	12.09.18 21:42

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 607930

LT Environmental, Inc.

PLU BS 15H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3072484 | Matrix: Solid | Date Prep: 12.11.18
MB Sample Id: 7667830-1-BLK | LCS Sample Id: 7667830-1-BKS | LCSD Sample Id: 7667830-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.103	103	0.110	110	70-130	7	35	mg/kg	12.11.18 13:37	
Toluene	<0.000456	0.100	0.0984	98	0.102	102	70-130	4	35	mg/kg	12.11.18 13:37	
Ethylbenzene	<0.000565	0.100	0.107	107	0.111	111	70-130	4	35	mg/kg	12.11.18 13:37	
m,p-Xylenes	<0.00101	0.200	0.196	98	0.202	101	70-130	3	35	mg/kg	12.11.18 13:37	
o-Xylene	<0.000344	0.100	0.0950	95	0.0976	98	70-130	3	35	mg/kg	12.11.18 13:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		100		101		70-130	%	12.11.18 13:37
4-Bromofluorobenzene	76		75		73		70-130	%	12.11.18 13:37

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3072726 | Matrix: Solid | Date Prep: 12.12.18
MB Sample Id: 7667975-1-BLK | LCS Sample Id: 7667975-1-BKS | LCSD Sample Id: 7667975-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.107	107	0.109	109	70-130	2	35	mg/kg	12.12.18 11:19	
Toluene	<0.000455	0.0998	0.0958	96	0.0993	99	70-130	4	35	mg/kg	12.12.18 11:19	
Ethylbenzene	<0.000564	0.0998	0.104	104	0.108	108	70-130	4	35	mg/kg	12.12.18 11:19	
m,p-Xylenes	<0.00101	0.200	0.189	95	0.196	98	70-130	4	35	mg/kg	12.12.18 11:19	
o-Xylene	<0.000344	0.0998	0.0911	91	0.0951	95	70-130	4	35	mg/kg	12.12.18 11:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		103		103		70-130	%	12.12.18 11:19
4-Bromofluorobenzene	75		75		74		70-130	%	12.12.18 11:19

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3072484 | Matrix: Soil | Date Prep: 12.11.18
Parent Sample Id: 607930-003 | MS Sample Id: 607930-003 S | MSD Sample Id: 607930-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000770	0.200	0.146	73	0.177	89	70-130	19	35	mg/kg	12.11.18 14:59	
Toluene	<0.000911	0.200	0.147	74	0.169	85	70-130	14	35	mg/kg	12.11.18 14:59	
Ethylbenzene	<0.00113	0.200	0.156	78	0.181	91	70-130	15	35	mg/kg	12.11.18 14:59	
m,p-Xylenes	<0.00203	0.400	0.290	73	0.331	83	70-130	13	35	mg/kg	12.11.18 14:59	
o-Xylene	<0.000689	0.200	0.139	70	0.159	80	70-130	13	35	mg/kg	12.11.18 14:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	12.11.18 14:59
4-Bromofluorobenzene	79		77		70-130	%	12.11.18 14:59

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

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

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

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

QC Summary 607930

LT Environmental, Inc.

PLU BS 15H

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

Seq Number: 3072726 Matrix: Soil Date Prep: 12.12.18

Parent Sample Id: 607930-006 MS Sample Id: 607930-006 S MSD Sample Id: 607930-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.0878	89	0.0910	91	70-130	4	35	mg/kg	12.12.18 11:57	
Toluene	<0.000452	0.0992	0.0806	81	0.0840	84	70-130	4	35	mg/kg	12.12.18 11:57	
Ethylbenzene	<0.000560	0.0992	0.0874	88	0.0907	91	70-130	4	35	mg/kg	12.12.18 11:57	
m,p-Xylenes	<0.00101	0.198	0.161	81	0.167	84	70-130	4	35	mg/kg	12.12.18 11:57	
o-Xylene	<0.000342	0.0992	0.0775	78	0.0806	81	70-130	4	35	mg/kg	12.12.18 11:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		106		70-130	%	12.12.18 11:57
4-Bromofluorobenzene	80		79		70-130	%	12.12.18 11:57

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

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Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote # | Xenco Job # 607930

Client / Reporting Information

Company Name / Branch: Ltenvironmental, Inc. Permian Office
Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abaker@ltenv.com Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Anna Byers

Project Information

Project Name/Number: PLU BS 15H
Project Location: Eddy County
Invoice To: XTO Kyle Littrell
PO Number:

Analytical Information

BTEX (only BTEX) 8021
TPH (DRO GRO MRO) 8015
Chloride (300.00)

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preservative bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	PH01 A	2'	12/05	10:00	S	1								X	
2	PH01 B	3'		10:05	S	1								X	
3	PH02 A	2'		10:45	S	1								X	
4	PH02 B	3'		10:50	S	1								X	
5	PH03 A	2'		11:10	S	1								X	
6	PH03 B	3'		11:15	S	1								X	
7	PH04 A	2'		11:30	S	1								X	
8	PH04 B	3'		11:35	S	1								X	
9	PH05 A	1.5'		12:00	S	1								X	
10	PH05 B	2.0'	↓	12:10	S	1								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	Anna Byers	12/06/2018 7:00	Jade Reyes	Jade Reyes	12/6/18 1530	
2	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 12/7/18 1130
3	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
4						8.7 R8 -0.1
5						

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.

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Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 2 Of 2

Xenco Quote #:
Xenco Job #: 607930

Client / Reporting Information

Company Name / Branch: CT Environmental, Inc. Permian Office
Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abaker@ctenv.com
Phone No: (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Anna Byers

Project Information

Project Name/Number: PLU BS 15H
Project Location: Eddy County
Invoice To: XTO Kyle Littrell
PO Number:

Analytical Information

BTEX (only BTEX) 8021
TPH (DRO, GRO, MRO) 8015
Chloride (300.00)

Matrix Codes

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

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	PH06 A	1'	12/05	12:20	S	1								X	
2	PH06 B	1.5'		12:30	S	1								X	
3	PH07 A	2'		13:15	S	1								X	
4	PH07 B	3'		13:20	S	1								X	
5	PH08 A	1'		13:45	S	1								X	
6	PH08 B	1.5'	↓	13:55	S	1								X	
7															
8															
9															
10															

CB 12/05/18

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

Relinquished by Sampler: 1	Anna Byers	Date Time: 7:00 12/06/2018	Received By: 1	Relinquished By: 2	Date Time: 12/6/18 1532	Received By: 2	12/7/18 1130
Relinquished by: 3		Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5		Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice	Cooler Temp. 0.8 / 1.7 Thermo. Corr. Factor 1.8 -0.1

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.

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2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/07/2018 11:30:00 AM

Work Order #: 607930

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)?	.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: Katie Lowe Date: 12/07/2018

Checklist reviewed by: Jessica Kramer Date: 12/11/2018

Jessica Kramer

Analytical Report 635490

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX JVBS 15H

012918136

04-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

04-SEP-19

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

Reference: XENCO Report No(s): **635490**
PLU CVX JVBS 15H
Project Address: Rural Eddy County

Dan Moir:

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) 635490. 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. 635490 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 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH09	S	08-28-19 10:20	2 ft	635490-001
PH09A	S	08-28-19 10:25	3 ft	635490-002
PH10	S	08-28-19 10:55	2 ft	635490-003
PH10A	S	08-28-19 11:05	3 ft	635490-004
PH11	S	08-28-19 12:25	1 ft	635490-005
PH11A	S	08-28-19 12:30	2 ft	635490-006
PH12	S	08-28-19 12:55	1 ft	635490-007
PH12A	S	08-28-19 13:10	3 ft	635490-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JVBS 15H

Project ID: *012918136*
Work Order Number(s): *635490*

Report Date: *04-SEP-19*
Date Received: *08/29/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100354 BTEX by EPA 8021B

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

Certificate of Analysis Summary 635490

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JVBS 15H

Project Id: 012918136
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Aug-29-19 08:35 am
Report Date: 04-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635490-001		635490-002		635490-003		635490-004		635490-005		635490-006	
	Field Id:	PH09		PH09A		PH10		PH10A		PH11		PH11A	
	Depth:	2- ft		3- ft		2- ft		3- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-28-19 10:20		Aug-28-19 10:25		Aug-28-19 10:55		Aug-28-19 11:05		Aug-28-19 12:25		Aug-28-19 12:30	
BTEX by EPA 8021B SUB: T104704400-18-16	*Extracted:*	Aug-30-19 12:00		Aug-30-19 12:00		Aug-30-19 12:00		Aug-30-19 12:00		Aug-30-19 12:00		Aug-30-19 12:00	
	Analyzed:	Aug-31-19 07:45		Aug-31-19 08:05		Aug-31-19 08:25		Aug-31-19 09:43		Aug-31-19 10:04		Aug-31-19 10:24	
	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	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00402	0.00402	<0.00397	0.00397	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	*Extracted:*	Aug-30-19 12:45		Aug-30-19 12:45		Aug-30-19 12:45		Aug-30-19 12:45		Aug-30-19 12:45		Aug-30-19 12:45	
	Analyzed:	Aug-30-19 13:39		Aug-30-19 13:59		Aug-30-19 14:05		Aug-30-19 14:12		Aug-30-19 14:18		Aug-30-19 14:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		184	4.99	205	4.99	232	4.98	158	5.03	49.5	5.05	52.6	5.04
TPH by SW8015 Mod SUB: T104704400-18-16	*Extracted:*	Aug-30-19 15:00		Aug-30-19 15:00		Aug-30-19 15:00		Aug-30-19 15:00		Aug-30-19 15:00		Aug-30-19 15:00	
	Analyzed:	Aug-30-19 19:49		Aug-30-19 20:09		Aug-30-19 20:28		Aug-30-19 20:48		Aug-30-19 21:26		Aug-30-19 21:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total TPH		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total GRO-DRO		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 635490

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JVBS 15H

Project Id: 012918136
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Thu Aug-29-19 08:35 am
Report Date: 04-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	635490-007		635490-008					
	Field Id:	PH12		PH12A					
	Depth:	1- ft		3- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-28-19 12:55		Aug-28-19 13:10					
BTEX by EPA 8021B	***Extracted:***	Aug-30-19 12:00		Aug-30-19 12:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-31-19 10:44		Aug-31-19 11:04					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00198	0.00198				
Toluene		<0.00201	0.00201	<0.00198	0.00198				
Ethylbenzene		<0.00201	0.00201	<0.00198	0.00198				
m,p-Xylenes		<0.00402	0.00402	<0.00396	0.00396				
o-Xylene		<0.00201	0.00201	<0.00198	0.00198				
Total Xylenes		<0.00201	0.00201	<0.00198	0.00198				
Total BTEX		<0.00201	0.00201	<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	Aug-30-19 12:45		Aug-30-19 12:45					
SUB: T104704400-18-16	***Analyzed:***	Aug-30-19 14:44		Aug-30-19 14:50					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		46.0	5.04	91.8	5.04				
TPH by SW8015 Mod	***Extracted:***	Aug-30-19 15:00		Aug-30-19 15:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-30-19 22:05		Aug-30-19 22:25					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9				
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9				
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9				
Total TPH		<25.0	25.0	<24.9	24.9				
Total GRO-DRO		<25.0	25.0	<24.9	24.9				

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-001	Date Collected:	08.28.19 10.20	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	4.99	mg/kg	08.30.19 13.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.30.19 19.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.30.19 19.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.30.19 19.49	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.30.19 19.49	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.30.19 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.30.19 19.49	
o-Terphenyl	84-15-1	89	%	70-135	08.30.19 19.49	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-001	Date Collected:	08.28.19 10.20	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.31.19 07.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.31.19 07.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124	%	70-130	08.31.19 07.45	
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.31.19 07.45	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-002	Date Collected:	08.28.19 10.25	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**205**	4.99	mg/kg	08.30.19 13.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 20.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.30.19 20.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 20.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.30.19 20.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.30.19 20.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.30.19 20.09	
o-Terphenyl	84-15-1	94	%	70-135	08.30.19 20.09	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-002	Date Collected:	08.28.19 10.25	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.31.19 08.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.31.19 08.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	08.31.19 08.05	
1,4-Difluorobenzene	540-36-3	89	%	70-130	08.31.19 08.05	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-003	Date Collected:	08.28.19 10.55	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**232**	4.98	mg/kg	08.30.19 14.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.30.19 20.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.30.19 20.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.30.19 20.28	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.30.19 20.28	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.30.19 20.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.30.19 20.28	
o-Terphenyl	84-15-1	95	%	70-135	08.30.19 20.28	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH10**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-003	Date Collected:	08.28.19 10.55	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.31.19 08.25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.31.19 08.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.31.19 08.25	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.31.19 08.25	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-004	Date Collected:	08.28.19 11.05	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**158**	5.03	mg/kg	08.30.19 14.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 20.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.30.19 20.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 20.48	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.30.19 20.48	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.30.19 20.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.30.19 20.48	
o-Terphenyl	84-15-1	87	%	70-135	08.30.19 20.48	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH10A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-004	Date Collected:	08.28.19 11.05	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.31.19 09.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.31.19 09.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.31.19 09.43	
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.31.19 09.43	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-005	Date Collected:	08.28.19 12.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.5**	5.05	mg/kg	08.30.19 14.18		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 21.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.30.19 21.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 21.26	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.30.19 21.26	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.30.19 21.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.30.19 21.26	
o-Terphenyl	84-15-1	91	%	70-135	08.30.19 21.26	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH11**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-005	Date Collected:	08.28.19 12.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.31.19 10.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.31.19 10.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.31.19 10.04	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.31.19 10.04	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-006	Date Collected:	08.28.19 12.30	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.6**	5.04	mg/kg	08.30.19 14.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 21.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.30.19 21.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 21.46	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.30.19 21.46	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.30.19 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.30.19 21.46	
o-Terphenyl	84-15-1	95	%	70-135	08.30.19 21.46	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH11A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-006	Date Collected:	08.28.19 12.30	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.31.19 10.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.31.19 10.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.31.19 10.24	
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.31.19 10.24	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-007	Date Collected:	08.28.19 12.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**46.0**	5.04	mg/kg	08.30.19 14.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.30.19 22.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.30.19 22.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.30.19 22.05	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.30.19 22.05	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.30.19 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.30.19 22.05	
o-Terphenyl	84-15-1	91	%	70-135	08.30.19 22.05	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH12**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-007	Date Collected:	08.28.19 12.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.31.19 10.44	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.31.19 10.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.31.19 10.44	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.31.19 10.44	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-008	Date Collected:	08.28.19 13.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.30.19 12.45	Basis:	Wet Weight
Seq Number:	3100251			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**91.8**	5.04	mg/kg	08.30.19 14.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.30.19 15.00	Basis:	Wet Weight
Seq Number:	3100268			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.30.19 22.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.30.19 22.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.30.19 22.25	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.30.19 22.25	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.30.19 22.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.30.19 22.25	
o-Terphenyl	84-15-1	95	%	70-135	08.30.19 22.25	

Certificate of Analytical Results 635490

LT Environmental, Inc., Arvada, CO

PLU CVX JVBS 15H

Sample Id:	**PH12A**	Matrix:	Soil	Date Received:	08.29.19 08.35
Lab Sample Id:	635490-008	Date Collected:	08.28.19 13.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.30.19 12.00	Basis:	Wet Weight
Seq Number:	3100354			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.31.19 11.04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.31.19 11.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.31.19 11.04	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.31.19 11.04	

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 635490

LT Environmental, Inc.

PLU CVX JVBS 15H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100251 Matrix: Solid Date Prep: 08.30.19
MB Sample Id: 7685382-1-BLK LCS Sample Id: 7685382-1-BKS LCSD Sample Id: 7685382-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	248	99	248	99	90-110	0	20	mg/kg	08.30.19 13:27	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100251 Matrix: Soil Date Prep: 08.30.19
Parent Sample Id: 635490-001 MS Sample Id: 635490-001 S MSD Sample Id: 635490-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	184	250	458	110	450	106	90-110	2	20	mg/kg	08.30.19 13:46	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100251 Matrix: Soil Date Prep: 08.30.19
Parent Sample Id: 635537-006 MS Sample Id: 635537-006 S MSD Sample Id: 635537-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	619	252	845	90	852	92	90-110	1	20	mg/kg	08.30.19 15:16	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3100268 Matrix: Solid Date Prep: 08.30.19
MB Sample Id: 7685399-1-BLK LCS Sample Id: 7685399-1-BKS LCSD Sample Id: 7685399-1-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	1000	100	996	100	70-135	0	20	mg/kg	08.30.19 16:37	
Diesel Range Organics (DRO)	<25.0	1000	964	96	961	96	70-135	0	20	mg/kg	08.30.19 16:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		123		122		70-135	%	08.30.19 16:37
o-Terphenyl	95		98		97		70-135	%	08.30.19 16:37

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 635490

LT Environmental, Inc.

PLU CVX JVBS 15H

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3100268 | Matrix: Soil | Date Prep: 08.30.19
Parent Sample Id: 635481-001 | MS Sample Id: 635481-001 S | MSD Sample Id: 635481-001 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	999	1100	110	1100	110	70-135	0	20	mg/kg	08.30.19 17:35	
Diesel Range Organics (DRO)	<25.0	999	1070	107	1070	107	70-135	0	20	mg/kg	08.30.19 17:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		127		70-135	%	08.30.19 17:35
o-Terphenyl	109		107		70-135	%	08.30.19 17:35

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100354 | Matrix: Solid | Date Prep: 08.30.19
MB Sample Id: 7685386-1-BLK | LCS Sample Id: 7685386-1-BKS | LCSD Sample Id: 7685386-1-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	0.0981	98	0.0932	93	70-130	5	35	mg/kg	08.31.19 03:24	
Toluene	<0.00200	0.100	0.101	101	0.0970	97	70-130	4	35	mg/kg	08.31.19 03:24	
Ethylbenzene	<0.00200	0.100	0.111	111	0.109	109	70-130	2	35	mg/kg	08.31.19 03:24	
m,p-Xylenes	<0.00101	0.200	0.220	110	0.218	109	70-130	1	35	mg/kg	08.31.19 03:24	
o-Xylene	<0.000344	0.100	0.115	115	0.114	114	70-130	1	35	mg/kg	08.31.19 03:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		99		70-130	%	08.31.19 03:24
4-Bromofluorobenzene	109		121		125		70-130	%	08.31.19 03:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3100354 | Matrix: Soil | Date Prep: 08.30.19
Parent Sample Id: 635481-001 | MS Sample Id: 635481-001 S | MSD Sample Id: 635481-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0682	69	0.0776	78	70-130	13	35	mg/kg	08.31.19 04:05	X
Toluene	<0.00199	0.0994	0.0713	72	0.0824	82	70-130	14	35	mg/kg	08.31.19 04:05	
Ethylbenzene	<0.00199	0.0994	0.0771	78	0.0907	91	70-130	16	35	mg/kg	08.31.19 04:05	
m,p-Xylenes	<0.00101	0.199	0.149	75	0.177	89	70-130	17	35	mg/kg	08.31.19 04:05	
o-Xylene	<0.00199	0.0994	0.0777	78	0.0916	92	70-130	16	35	mg/kg	08.31.19 04:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	08.31.19 04:05
4-Bromofluorobenzene	124		128		70-130	%	08.31.19 04:05

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

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 635490

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A St	Address:	3104 E. Greene Street
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	abyers@ltenv.com & dmoir@ltenv.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 15H	Turn Around	
Project Number:	012918136	Routine	☒
Project Location	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-4880	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	PH09	S	8/28/19	1020	2'	1				
	PH09A			1025	3'	1				
	PH10			1055	2'	1				
	PH10A			1105	3'	1				
	PH11			1225	1'	1				
	PH11A			1230	2'	1				
	PH12			1255	1'	1				
	PH12A			1310	3'	1				

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		08/29/2019 8:00	2		08/29/2019 8:35
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number **47142**

Date/Time: 08/29/19 11:56
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776116689750

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
635490-001	S	PH09	08/28/19 10:20	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-001	S	PH09	08/28/19 10:20	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-001	S	PH09	08/28/19 10:20	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-002	S	PH09A	08/28/19 10:25	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-002	S	PH09A	08/28/19 10:25	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-002	S	PH09A	08/28/19 10:25	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-003	S	PH10	08/28/19 10:55	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-003	S	PH10	08/28/19 10:55	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-003	S	PH10	08/28/19 10:55	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-004	S	PH10A	08/28/19 11:05	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-004	S	PH10A	08/28/19 11:05	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-004	S	PH10A	08/28/19 11:05	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-005	S	PH11	08/28/19 12:25	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-005	S	PH11	08/28/19 12:25	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-005	S	PH11	08/28/19 12:25	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-006	S	PH11A	08/28/19 12:30	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-006	S	PH11A	08/28/19 12:30	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-006	S	PH11A	08/28/19 12:30	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-007	S	PH12	08/28/19 12:55	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-007	S	PH12	08/28/19 12:55	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-007	S	PH12	08/28/19 12:55	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	
635490-008	S	PH12A	08/28/19 13:10	SW8021B	BTEX by EPA 8021B	09/05/19	09/11/19	JKR	BR4FBZ BZ BZME EBZ X	
635490-008	S	PH12A	08/28/19 13:10	E300_CL	Chloride by EPA 300	09/05/19	02/24/20	JKR	CL	
635490-008	S	PH12A	08/28/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	09/05/19	09/11/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **47142**

Date/Time: 08/29/19 11:56
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776116689750

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/29/2019

Received By: Brianna Teel

Date Received: 08/30/2019 11:10

Cooler Temperature: 2.1

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47142

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 08/29/2019 11:56 AM

Received By: Brianna Teel **Date Received:** 08/30/2019 11:10 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 08/30/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/29/2019 08:35:00 AM

Work Order #: 635490

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#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)?	**Yes**	Subbed to Xenco Midland.
#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: Elizabeth McClellan Date: 08/29/2019

Checklist reviewed by: Jessica Kramer Date: 08/29/2019

Jessica Kramer

Analytical Report 636389

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX JV B5 15H

012918136

12-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-SEP-19

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

Reference: XENCO Report No(s): **636389**
PLU CVX JV B5 15H
Project Address: Rural Eddy County

Dan Moir:

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) 636389. 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. 636389 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 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	09-09-19 15:05	0 - 8.5 ft	636389-001
SW02	S	09-09-19 15:10	0 - 8.5 ft	636389-002
SW03	S	09-09-19 15:15	0 - 8.5 ft	636389-003
SW04	S	09-09-19 15:20	0 - 8.5 ft	636389-004
SW05	S	09-09-19 15:25	0 - 8.5 ft	636389-005
SW06	S	09-09-19 15:30	0 - 8.5 ft	636389-006
SW07	S	09-09-19 15:35	0 - 8.5 ft	636389-007
SW08	S	09-09-19 15:40	0 - 8.5 ft	636389-008
FS01	S	09-09-19 15:50	8.5 ft	636389-009
FS02	S	09-09-19 12:15	10 ft	636389-010
FS03	S	09-09-19 15:55	9 ft	636389-011
FS04	S	09-09-19 13:10	20.5 ft	636389-012

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV B5 15H

Project ID: *012918136*
Work Order Number(s): *636389*

Report Date: *12-SEP-19*
Date Received: *09/10/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101116 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3101127 Chloride by EPA 300
Lab Sample ID 636392-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 636389-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3101140 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 636389-001 S,636389-007,636389-006.
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 636389-006,636389-010.

Certificate of Analysis Summary 636389

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV B5 15H

Project Id: 012918136
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Tue Sep-10-19 08:10 am
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested		636389-001		636389-002		636389-003		636389-004		636389-005		636389-006	
	Field Id:	SW01		SW02		SW03		SW04		SW05		SW06	
	Depth:	0-8.5 ft		0-8.5 ft		0-8.5 ft		0-8.5 ft		0-8.5 ft		0-8.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-09-19 15:05		Sep-09-19 15:10		Sep-09-19 15:15		Sep-09-19 15:20		Sep-09-19 15:25		Sep-09-19 15:30	
BTEX by EPA 8021B	*Extracted:*	Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09	
	Analyzed:	Sep-10-19 11:43		Sep-10-19 13:02		Sep-10-19 18:18		Sep-10-19 13:21		Sep-10-19 13:41		Sep-10-19 18:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00100	0.00100	<0.00101	0.00101	<0.0992	0.0992	<0.00000990	0.00000990	<0.00101	0.00101	0.246	0.0992
Toluene		<0.00100	0.00100	<0.00101	0.00101	0.621	0.0992	<0.00000990	0.00000990	0.00114	0.00101	4.09	0.0992
Ethylbenzene		<0.00100	0.00100	<0.00101	0.00101	0.487	0.0992	<0.00000990	0.00000990	<0.00101	0.00101	3.10	0.0992
m,p-Xylenes		<0.00201	0.00201	<0.00202	0.00202	2.83	0.198	<0.0000198	0.0000198	0.00272	0.00202	11.1	0.198
o-Xylene		<0.00100	0.00100	<0.00101	0.00101	1.01	0.0992	<0.00000990	0.00000990	0.00156	0.00101	6.97	0.0992
Total Xylenes		<0.00100	0.00100	<0.00101	0.00101	3.84	0.0992	<0.00000990	0.00000990	0.00428	0.00101	18.1	0.0992
Total BTEX		<0.00100	0.00100	<0.00101	0.00101	4.95	0.0992	<0.00000990	0.00000990	0.00542	0.00101	25.5	0.0992
Chloride by EPA 300	*Extracted:*	Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09	
	Analyzed:	Sep-10-19 12:26		Sep-10-19 12:45		Sep-10-19 12:52		Sep-10-19 12:58		Sep-10-19 13:05		Sep-10-19 13:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		227	9.98	558	10.0	498	9.82	107	9.92	94.5	9.98	1340	50.4
TPH by SW8015 Mod	*Extracted:*	Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30	
	Analyzed:	Sep-10-19 15:03		Sep-10-19 16:05		Sep-10-19 16:26		Sep-10-19 16:46		Sep-10-19 17:07		Sep-11-19 09:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.1	25.1	<25.1	25.1	288	25.0	<25.0	25.0	<25.0	25.0	1050	25.0
Diesel Range Organics (DRO)		<25.1	25.1	<25.1	25.1	1060	25.0	<25.0	25.0	<25.0	25.0	3000	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total GRO-DRO		<25.1	25.1	<25.1	25.1	1350	25.0	<25.0	25.0	<25.0	25.0	4050	25.0
Total TPH		<25.1	25.1	<25.1	25.1	1350	25.0	<25.0	25.0	<25.0	25.0	4050	25.0

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analysis Summary 636389

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV B5 15H

Project Id: 012918136
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Tue Sep-10-19 08:10 am
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636389-007		636389-008		636389-009		636389-010		636389-011		636389-012	
	Field Id:	SW07		SW08		FS01		FS02		FS03		FS04	
	Depth:	0-8.5 ft		0-8.5 ft		8.5- ft		10- ft		9- ft		20.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Sep-09-19 15:35		Sep-09-19 15:40		Sep-09-19 15:50		Sep-09-19 12:15		Sep-09-19 15:55		Sep-09-19 13:10	
BTEX by EPA 8021B	*Extracted:*	Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09	
	Analyzed:	Sep-10-19 18:57		Sep-10-19 14:01		Sep-10-19 14:21		Sep-10-19 19:18		Sep-10-19 14:40		Sep-10-19 15:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.101	0.101	<0.00101	0.00101	<0.00100	0.00100	<0.100	0.100	<0.00101	0.00101	<0.000996	0.000996
Toluene		1.36	0.101	<0.00101	0.00101	0.00140	0.00100	0.895	0.100	<0.00101	0.00101	<0.000996	0.000996
Ethylbenzene		1.37	0.101	<0.00101	0.00101	0.00163	0.00100	1.60	0.100	<0.00101	0.00101	<0.000996	0.000996
m,p-Xylenes		6.01	0.202	<0.00202	0.00202	0.00860	0.00200	7.36	0.200	<0.00202	0.00202	<0.00199	0.00199
o-Xylene		3.93	0.101	<0.00101	0.00101	0.00594	0.00100	2.29	0.100	<0.00101	0.00101	<0.000996	0.000996
Total Xylenes		9.94	0.101	<0.00101	0.00101	0.0145	0.00100	9.65	0.100	<0.00101	0.00101	<0.000996	0.000996
Total BTEX		12.7	0.101	<0.00101	0.00101	0.0176	0.00100	12.1	0.100	<0.00101	0.00101	<0.000996	0.000996
Chloride by EPA 300	*Extracted:*	Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09		Sep-10-19 10:09	
	Analyzed:	Sep-10-19 13:38		Sep-10-19 13:44		Sep-10-19 14:24		Sep-10-19 14:03		Sep-10-19 17:59		Sep-10-19 14:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1180	50.3	969	50.5	2450	50.3	16.9	9.98	<9.86	9.86	10.2	9.94
TPH by SW8015 Mod	*Extracted:*	Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30		Sep-10-19 11:30	
	Analyzed:	Sep-10-19 17:48		Sep-10-19 18:09		Sep-10-19 18:30		Sep-11-19 09:39		Sep-10-19 19:32		Sep-10-19 19:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		446	25.0	<25.0	25.0	<25.1	25.1	629	25.1	<25.0	25.0	<25.1	25.1
Diesel Range Organics (DRO)		1630	25.0	<25.0	25.0	49.0	25.1	2120	25.1	<25.0	25.0	<25.1	25.1
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.1	25.1	<25.1	25.1	<25.0	25.0	<25.1	25.1
Total GRO-DRO		2080	25.0	<25.0	25.0	49.0	25.1	2750	25.1	<25.0	25.0	<25.1	25.1
Total TPH		2080	25.0	<25.0	25.0	49.0	25.1	2750	25.1	<25.0	25.0	<25.1	25.1

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-001	Date Collected:	09.09.19 15.05	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**227**	9.98	mg/kg	09.10.19 12.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.10.19 15.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.10.19 15.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.10.19 15.03	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.10.19 15.03	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.10.19 15.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.10.19 15.03	
o-Terphenyl	84-15-1	100	%	70-135	09.10.19 15.03	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-001	Date Collected:	09.09.19 15.05	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	09.10.19 11.43	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1
Total BTEX		<0.00100	0.00100	mg/kg	09.10.19 11.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	09.10.19 11.43	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.10.19 11.43	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-002	Date Collected:	09.09.19 15.10	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**558**	10.0	mg/kg	09.10.19 12.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.10.19 16.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.10.19 16.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.10.19 16.05	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.10.19 16.05	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.10.19 16.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	09.10.19 16.05	
o-Terphenyl	84-15-1	104	%	70-135	09.10.19 16.05	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-002	Date Collected:	09.09.19 15.10	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.10.19 13.02	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.10.19 13.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	09.10.19 13.02	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.10.19 13.02	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-003	Date Collected:	09.09.19 15.15	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**498**	9.82	mg/kg	09.10.19 12.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**288**	25.0	mg/kg	09.10.19 16.26		1
Diesel Range Organics (DRO)	C10C28DRO	**1060**	25.0	mg/kg	09.10.19 16.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 16.26	U	1
Total GRO-DRO	PHC628	**1350**	25.0	mg/kg	09.10.19 16.26		1
Total TPH	PHC635	**1350**	25.0	mg/kg	09.10.19 16.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	09.10.19 16.26	
o-Terphenyl	84-15-1	120	%	70-135	09.10.19 16.26	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-003	Date Collected:	09.09.19 15.15	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0992	0.0992	mg/kg	09.10.19 18.18	U	100
Toluene	108-88-3	**0.621**	0.0992	mg/kg	09.10.19 18.18		100
Ethylbenzene	100-41-4	**0.487**	0.0992	mg/kg	09.10.19 18.18		100
m,p-Xylenes	179601-23-1	**2.83**	0.198	mg/kg	09.10.19 18.18		100
o-Xylene	95-47-6	**1.01**	0.0992	mg/kg	09.10.19 18.18		100
Total Xylenes	1330-20-7	**3.84**	0.0992	mg/kg	09.10.19 18.18		100
Total BTEX		**4.95**	0.0992	mg/kg	09.10.19 18.18		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	09.10.19 18.18	
1,4-Difluorobenzene	540-36-3	109	%	70-130	09.10.19 18.18	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-004	Date Collected:	09.09.19 15.20	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**107**	9.92	mg/kg	09.10.19 12.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.10.19 16.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.10.19 16.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 16.46	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.10.19 16.46	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.10.19 16.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.10.19 16.46	
o-Terphenyl	84-15-1	102	%	70-135	09.10.19 16.46	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-004	Date Collected:	09.09.19 15.20	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1
Toluene	108-88-3	<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1
Ethylbenzene	100-41-4	<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1
m,p-Xylenes	179601-23-1	<0.0000198	0.0000198	mg/kg	09.10.19 13.21	U	1
o-Xylene	95-47-6	<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1
Total Xylenes	1330-20-7	<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1
Total BTEX		<0.00000990	0.00000990	mg/kg	09.10.19 13.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.10.19 13.21	
4-Bromofluorobenzene	460-00-4	110	%	70-130	09.10.19 13.21	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-005	Date Collected:	09.09.19 15.25	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**94.5**	9.98	mg/kg	09.10.19 13.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.10.19 17.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.10.19 17.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 17.07	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.10.19 17.07	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.10.19 17.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	09.10.19 17.07	
o-Terphenyl	84-15-1	99	%	70-135	09.10.19 17.07	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-005	Date Collected:	09.09.19 15.25	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.10.19 13.41	U	1
Toluene	108-88-3	**0.00114**	0.00101	mg/kg	09.10.19 13.41		1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.10.19 13.41	U	1
m,p-Xylenes	179601-23-1	**0.00272**	0.00202	mg/kg	09.10.19 13.41		1
o-Xylene	95-47-6	**0.00156**	0.00101	mg/kg	09.10.19 13.41		1
Total Xylenes	1330-20-7	**0.00428**	0.00101	mg/kg	09.10.19 13.41		1
Total BTEX		**0.00542**	0.00101	mg/kg	09.10.19 13.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.10.19 13.41	
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.10.19 13.41	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-006	Date Collected:	09.09.19 15.30	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1340**	50.4	mg/kg	09.10.19 13.31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1050**	25.0	mg/kg	09.11.19 09.19		1
Diesel Range Organics (DRO)	C10C28DRO	**3000**	25.0	mg/kg	09.11.19 09.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 09.19	U	1
Total GRO-DRO	PHC628	**4050**	25.0	mg/kg	09.11.19 09.19		1
Total TPH	PHC635	**4050**	25.0	mg/kg	09.11.19 09.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	138	%	70-135	09.11.19 09.19	**
o-Terphenyl	84-15-1	140	%	70-135	09.11.19 09.19	**

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-006	Date Collected:	09.09.19 15.30	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.246**	0.0992	mg/kg	09.10.19 18.38		100
Toluene	108-88-3	**4.09**	0.0992	mg/kg	09.10.19 18.38		100
Ethylbenzene	100-41-4	**3.10**	0.0992	mg/kg	09.10.19 18.38		100
m,p-Xylenes	179601-23-1	**11.1**	0.198	mg/kg	09.10.19 18.38		100
o-Xylene	95-47-6	**6.97**	0.0992	mg/kg	09.10.19 18.38		100
Total Xylenes	1330-20-7	**18.1**	0.0992	mg/kg	09.10.19 18.38		100
Total BTEX		**25.5**	0.0992	mg/kg	09.10.19 18.38		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	119	%	70-130	09.10.19 18.38	
4-Bromofluorobenzene	460-00-4	124	%	70-130	09.10.19 18.38	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-007	Date Collected:	09.09.19 15.35	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1180**	50.3	mg/kg	09.10.19 13.38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**446**	25.0	mg/kg	09.10.19 17.48		1
Diesel Range Organics (DRO)	C10C28DRO	**1630**	25.0	mg/kg	09.10.19 17.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 17.48	U	1
Total GRO-DRO	PHC628	**2080**	25.0	mg/kg	09.10.19 17.48		1
Total TPH	PHC635	**2080**	25.0	mg/kg	09.10.19 17.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	139	%	70-135	09.10.19 17.48	**
o-Terphenyl	84-15-1	134	%	70-135	09.10.19 17.48	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-007	Date Collected:	09.09.19 15.35	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.101	0.101	mg/kg	09.10.19 18.57	U	100
Toluene	108-88-3	**1.36**	0.101	mg/kg	09.10.19 18.57		100
Ethylbenzene	100-41-4	**1.37**	0.101	mg/kg	09.10.19 18.57		100
m,p-Xylenes	179601-23-1	**6.01**	0.202	mg/kg	09.10.19 18.57		100
o-Xylene	95-47-6	**3.93**	0.101	mg/kg	09.10.19 18.57		100
Total Xylenes	1330-20-7	**9.94**	0.101	mg/kg	09.10.19 18.57		100
Total BTEX		**12.7**	0.101	mg/kg	09.10.19 18.57		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	09.10.19 18.57	
4-Bromofluorobenzene	460-00-4	122	%	70-130	09.10.19 18.57	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-008	Date Collected:	09.09.19 15.40	Sample Depth:	0 - 8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**969**	50.5	mg/kg	09.10.19 13.44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.10.19 18.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.10.19 18.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 18.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.10.19 18.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.10.19 18.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	09.10.19 18.09	
o-Terphenyl	84-15-1	102	%	70-135	09.10.19 18.09	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-008	Date Collected:	09.09.19 15.40	Sample Depth:	0 - 8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.10.19 14.01	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.10.19 14.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.10.19 14.01	
4-Bromofluorobenzene	460-00-4	104	%	70-130	09.10.19 14.01	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-009	Date Collected:	09.09.19 15.50	Sample Depth:	8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2450**	50.3	mg/kg	09.10.19 14.24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.10.19 18.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	**49.0**	25.1	mg/kg	09.10.19 18.30		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.10.19 18.30	U	1
Total GRO-DRO	PHC628	**49.0**	25.1	mg/kg	09.10.19 18.30		1
Total TPH	PHC635	**49.0**	25.1	mg/kg	09.10.19 18.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	09.10.19 18.30	
o-Terphenyl	84-15-1	106	%	70-135	09.10.19 18.30	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-009	Date Collected:	09.09.19 15.50	Sample Depth:	8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	09.10.19 14.21	U	1
Toluene	108-88-3	**0.00140**	0.00100	mg/kg	09.10.19 14.21		1
Ethylbenzene	100-41-4	**0.00163**	0.00100	mg/kg	09.10.19 14.21		1
m,p-Xylenes	179601-23-1	**0.00860**	0.00200	mg/kg	09.10.19 14.21		1
o-Xylene	95-47-6	**0.00594**	0.00100	mg/kg	09.10.19 14.21		1
Total Xylenes	1330-20-7	**0.0145**	0.00100	mg/kg	09.10.19 14.21		1
Total BTEX		**0.0176**	0.00100	mg/kg	09.10.19 14.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	09.10.19 14.21	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.10.19 14.21	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-010	Date Collected:	09.09.19 12.15	Sample Depth:	10 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.9**	9.98	mg/kg	09.10.19 14.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**629**	25.1	mg/kg	09.11.19 09.39		1
Diesel Range Organics (DRO)	C10C28DRO	**2120**	25.1	mg/kg	09.11.19 09.39		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.11.19 09.39	U	1
Total GRO-DRO	PHC628	**2750**	25.1	mg/kg	09.11.19 09.39		1
Total TPH	PHC635	**2750**	25.1	mg/kg	09.11.19 09.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	135	%	70-135	09.11.19 09.39	
o-Terphenyl	84-15-1	139	%	70-135	09.11.19 09.39	**

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-010	Date Collected:	09.09.19 12.15	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.100	0.100	mg/kg	09.10.19 19.18	U	100
Toluene	108-88-3	**0.895**	0.100	mg/kg	09.10.19 19.18		100
Ethylbenzene	100-41-4	**1.60**	0.100	mg/kg	09.10.19 19.18		100
m,p-Xylenes	179601-23-1	**7.36**	0.200	mg/kg	09.10.19 19.18		100
o-Xylene	95-47-6	**2.29**	0.100	mg/kg	09.10.19 19.18		100
Total Xylenes	1330-20-7	**9.65**	0.100	mg/kg	09.10.19 19.18		100
Total BTEX		**12.1**	0.100	mg/kg	09.10.19 19.18		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	09.10.19 19.18	
4-Bromofluorobenzene	460-00-4	128	%	70-130	09.10.19 19.18	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-011	Date Collected:	09.09.19 15.55	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.86	9.86	mg/kg	09.10.19 17.59	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.10.19 19.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.10.19 19.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.10.19 19.32	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.10.19 19.32	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.10.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	09.10.19 19.32	
o-Terphenyl	84-15-1	103	%	70-135	09.10.19 19.32	

Certificate of Analytical Results 636389

LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-011	Date Collected:	09.09.19 15.55	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.10.19 14.40	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.10.19 14.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.10.19 14.40	
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.10.19 14.40	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-012	Date Collected:	09.09.19 13.10	Sample Depth:	20.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101127				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.2**	9.94	mg/kg	09.10.19 14.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 11.30	Basis:	Wet Weight
Seq Number:	3101140				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.10.19 19.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.10.19 19.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.10.19 19.52	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.10.19 19.52	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.10.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	09.10.19 19.52	
o-Terphenyl	84-15-1	100	%	70-135	09.10.19 19.52	

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LT Environmental, Inc., Arvada, CO

PLU CVX JV B5 15H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	09.10.19 08.10
Lab Sample Id:	636389-012	Date Collected:	09.09.19 13.10	Sample Depth:	20.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.10.19 10.09	Basis:	Wet Weight
Seq Number:	3101116				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.10.19 15.00	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.10.19 15.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.10.19 15.00	
4-Bromofluorobenzene	460-00-4	120	%	70-130	09.10.19 15.00	

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 636389

LT Environmental, Inc.

PLU CVX JV B5 15H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101127 Matrix: Solid Date Prep: 09.10.19
MB Sample Id: 7685854-1-BLK LCS Sample Id: 7685854-1-BKS LCSD Sample Id: 7685854-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	259	104	259	104	90-110	0	20	mg/kg	09.10.19 12:12	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101127 Matrix: Soil Date Prep: 09.10.19
Parent Sample Id: 636389-001 MS Sample Id: 636389-001 S MSD Sample Id: 636389-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	227	199	463	119	465	120	90-110	0	20	mg/kg	09.10.19 12:32	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101127 Matrix: Solid Date Prep: 09.10.19
Parent Sample Id: 636392-001 MS Sample Id: 636392-001 S MSD Sample Id: 636392-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10600	4040	15500	121	15600	124	90-110	1	20	mg/kg	09.10.19 15:03	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101140 Matrix: Solid Date Prep: 09.10.19
MB Sample Id: 7685918-1-BLK LCS Sample Id: 7685918-1-BKS LCSD Sample Id: 7685918-1-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)	<25.0	1000	899	90	918	92	70-135	2	35	mg/kg	09.10.19 14:22	
Diesel Range Organics (DRO)	<25.0	1000	843	84	855	86	70-135	1	35	mg/kg	09.10.19 14:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		123		128		70-135	%	09.10.19 14:22
o-Terphenyl	96		112		112		70-135	%	09.10.19 14:22

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

QC Summary 636389

LT Environmental, Inc.

PLU CVX JV B5 15H

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3101140 | Matrix: Soil | Date Prep: 09.10.19
Parent Sample Id: 636389-001 | MS Sample Id: 636389-001 S | MSD Sample Id: 636389-001 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)	<25.1	1010	1020	101	949	95	70-135	7	35	mg/kg	09.10.19 15:24	
Diesel Range Organics (DRO)	<25.1	1010	950	94	875	88	70-135	8	35	mg/kg	09.10.19 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	138	**	126		70-135	%	09.10.19 15:24
o-Terphenyl	122		113		70-135	%	09.10.19 15:24

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101116 | Matrix: Solid | Date Prep: 09.10.19
MB Sample Id: 7685989-1-BLK | LCS Sample Id: 7685989-1-BKS | LCSD Sample Id: 7685989-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0787	79	0.0812	81	70-130	3	35	mg/kg	09.10.19 10:44	
Toluene	<0.00100	0.100	0.0947	95	0.0953	95	70-130	1	35	mg/kg	09.10.19 10:44	
Ethylbenzene	<0.00100	0.100	0.115	115	0.117	117	71-129	2	35	mg/kg	09.10.19 10:44	
m,p-Xylenes	<0.00200	0.200	0.236	118	0.240	120	70-135	2	35	mg/kg	09.10.19 10:44	
o-Xylene	<0.00100	0.100	0.118	118	0.122	122	71-133	3	35	mg/kg	09.10.19 10:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		111		107		70-130	%	09.10.19 10:44
4-Bromofluorobenzene	118		127		127		70-130	%	09.10.19 10:44

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3101116 | Matrix: Soil | Date Prep: 09.10.19
Parent Sample Id: 636389-001 | MS Sample Id: 636389-001 S | MSD Sample Id: 636389-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0991	98	0.0919	92	70-130	8	35	mg/kg	09.10.19 12:03	
Toluene	<0.00101	0.101	0.105	104	0.0979	98	70-130	7	35	mg/kg	09.10.19 12:03	
Ethylbenzene	<0.00101	0.101	0.117	116	0.110	111	71-129	6	35	mg/kg	09.10.19 12:03	
m,p-Xylenes	<0.00202	0.202	0.241	119	0.228	115	70-135	6	35	mg/kg	09.10.19 12:03	
o-Xylene	<0.00101	0.101	0.119	118	0.113	114	71-133	5	35	mg/kg	09.10.19 12:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		104		70-130	%	09.10.19 12:03
4-Bromofluorobenzene	128		126		70-130	%	09.10.19 12:03

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

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 636389

Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 N A St	Address:	3104 E. Greene St
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	abyers@ltenv.com dmoir@ltenv.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 15H	Turn Around	
Project Number:	012918136	Routine ☐	
Project Location	Rural Eddy County	Rush: 5 day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-4880	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.8	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	12

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	SW01	S	9/9/19	1505	0-8.5'	1			
	SW02			1510		1			
	SW03			1515		1			
	SW04			1520		1			
	SW05			1525		1			
	SW06			1530		1			
	SW07			1535		1			
	SW08			1540	↓	1			
	FS01			1550	8.5'	1			
	FS02	↓	↓	1215	10'	1			

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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 SiO2 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

1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		9.10.19	2		9/10/19 08:10
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 636389

Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 N A St	Address:	3104 E. Greene St.
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	abyers@ltenv.com + dmoir@ltenv.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 15H	Turn Around	
Project Number:	012918136	Routine ☐	
Project Location	Rural Eddy County	Rush: 5 day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-4880	Quote #:	

SAMPLE RECEIPT			
Temperature (°C):		Temp Blank: Yes No	Wet Ice: Yes No
Received Intact:	Yes No	Thermometer ID:	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	
Sample Custody Seals:	Yes No N/A	Total Containers:	

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	FS03	S	9/9/19	1555	9'	1		x	x	x
	FS04	S	9/9/19	1310	20.5'	1		x	x	x

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		810 9.10.19	2		9/10/19 08:10
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/10/2019 08:10:00 AM

Work Order #: 636389

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#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: Elizabeth McClellan Date: 09/10/2019

Checklist reviewed by: Jessica Kramer Date: 09/10/2019

Jessica Kramer

Analytical Report 636960

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX JV BS 15H

012918136

23-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

23-SEP-19

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

Reference: XENCO Report No(s): **636960**
PLU CVX JV BS 15H
Project Address: Rural Eddy County

Dan Moir:

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) 636960. 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. 636960 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 636960

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH12B	S	09-13-19 11:20	6 ft	636960-001
PH12C	S	09-13-19 11:40	10 ft	636960-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV BS 15H

Project ID: *012918136*
Work Order Number(s): *636960*

Report Date: *23-SEP-19*
Date Received: *09/16/2019*

Sample receipt non conformances and comments:

Corrected sample 002 date. REVISED REPORT 09/23/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101780 BTEX by EPA 8021B

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

Certificate of Analysis Summary 636960

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 15H

Project Id: 012918136
Contact: Dan Moir
Project Location: Rural Eddy County

Date Received in Lab: Mon Sep-16-19 12:00 pm
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636960-001		636960-002									
	Field Id:	PH12B		PH12C									
	Depth:	6- ft		10- ft									
	Matrix:	SOIL		SOIL									
	Sampled:	Sep-13-19 11:20		Sep-13-19 11:40									
BTEX by EPA 8021B SUB: T104704400-18-18	***Extracted:***	Sep-17-19 11:45		Sep-17-19 11:45									
	Analyzed:	Sep-18-19 00:59		Sep-18-19 01:20									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00200	0.00200	<0.00200	0.00200								
Toluene		<0.00200	0.00200	<0.00200	0.00200								
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200								
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401								
o-Xylene		<0.00200	0.00200	<0.00200	0.00200								
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200								
Total BTEX		<0.00200	0.00200	<0.00200	0.00200								
Chloride by EPA 300 SUB: T104704400-18-18	***Extracted:***	Sep-17-19 12:00		Sep-17-19 13:20									
	Analyzed:	Sep-17-19 18:30		Sep-17-19 15:19									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		39.4	4.97	25.3	5.01								
TPH by SW8015 Mod SUB: T104704400-18-18	***Extracted:***	Sep-17-19 11:00		Sep-17-19 11:00									
	Analyzed:	Sep-17-19 19:32		Sep-17-19 19:54									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0								
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0								
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0								
Total GRO-DRO		<25.0	25.0	<25.0	25.0								
Total TPH		<25.0	25.0	<25.0	25.0								

Jessica Kramer
Project Assistant

Certificate of Analytical Results 636960

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id: **PH12B** Matrix: Soil Date Received:09.16.19 12.00

Lab Sample Id: 636960-001 Date Collected: 09.13.19 11.20 Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.17.19 12.00 Basis: Wet Weight

Seq Number: 3101734 SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.4**	4.97	mg/kg	09.17.19 18.30		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.17.19 11.00 Basis: Wet Weight

Seq Number: 3101748 SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.17.19 19.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.17.19 19.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.17.19 19.32	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.17.19 19.32	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.17.19 19.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.17.19 19.32	
o-Terphenyl	84-15-1	105	%	70-135	09.17.19 19.32	

Certificate of Analytical Results 636960

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH12B**	Matrix:	Soil	Date Received:	09.16.19 12.00
Lab Sample Id:	636960-001	Date Collected:	09.13.19 11.20	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.18.19 00.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.19 00.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.18.19 00.59	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.18.19 00.59	

Certificate of Analytical Results 636960

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id: **PH12C** Matrix: Soil Date Received:09.16.19 12.00

Lab Sample Id: 636960-002 Date Collected: 09.13.19 11.40 Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 09.17.19 13.20 Basis: Wet Weight

Seq Number: 3101737 SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.3**	5.01	mg/kg	09.17.19 15.19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 09.17.19 11.00 Basis: Wet Weight

Seq Number: 3101748 SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.17.19 19.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.17.19 19.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.17.19 19.54	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.17.19 19.54	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.17.19 19.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	09.17.19 19.54	
o-Terphenyl	84-15-1	119	%	70-135	09.17.19 19.54	

Certificate of Analytical Results 636960

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH12C**	Matrix:	Soil	Date Received:	09.16.19 12.00
Lab Sample Id:	636960-002	Date Collected:	09.13.19 11.40	Sample Depth:	10 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.18.19 01.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.18.19 01.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.18.19 01.20	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.18.19 01.20	

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 636960

LT Environmental, Inc.

PLU CVX JV BS 15H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101734 Matrix: Solid Date Prep: 09.17.19
MB Sample Id: 7686328-1-BLK LCS Sample Id: 7686328-1-BKS LCSD Sample Id: 7686328-1-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	258	103	266	106	90-110	3	20	mg/kg	09.17.19 15:23	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101737 Matrix: Solid Date Prep: 09.17.19
MB Sample Id: 7686340-1-BLK LCS Sample Id: 7686340-1-BKS LCSD Sample Id: 7686340-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	237	95	245	98	90-110	3	20	mg/kg	09.17.19 13:34	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101734 Matrix: Soil Date Prep: 09.17.19
Parent Sample Id: 637021-003 MS Sample Id: 637021-003 S MSD Sample Id: 637021-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.8	250	311	115	292	107	90-110	6	20	mg/kg	09.17.19 15:43	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101734 Matrix: Soil Date Prep: 09.17.19
Parent Sample Id: 637028-008 MS Sample Id: 637028-008 S MSD Sample Id: 637028-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.78	250	277	109	273	108	90-110	1	20	mg/kg	09.17.19 17:13	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101737 Matrix: Soil Date Prep: 09.17.19
Parent Sample Id: 636969-003 MS Sample Id: 636969-003 S MSD Sample Id: 636969-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	249	249	481	93	491	97	90-110	2	20	mg/kg	09.17.19 16:28	

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

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

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

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

QC Summary 636960

LT Environmental, Inc.

PLU CVX JV BS 15H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101737 Matrix: Soil Date Prep: 09.17.19
Parent Sample Id: 637059-009 MS Sample Id: 637059-009 S MSD Sample Id: 637059-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	39.5	248	245	83	256	87	90-110	4	20	mg/kg	09.17.19 13:53	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101748 Matrix: Solid Date Prep: 09.17.19
MB Sample Id: 7686312-1-BLK LCS Sample Id: 7686312-1-BKS LCSD Sample Id: 7686312-1-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	989	99	1070	107	70-135	8	20	mg/kg	09.17.19 11:48	
Diesel Range Organics (DRO)	<15.0	1000	910	91	1050	105	70-135	14	20	mg/kg	09.17.19 11:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		114		126		70-135	%	09.17.19 11:48
o-Terphenyl	92		104		127		70-135	%	09.17.19 11:48

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101748 Matrix: Soil Date Prep: 09.17.19
Parent Sample Id: 636971-001 MS Sample Id: 636971-001 S MSD Sample Id: 636971-001 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	999	923	92	968	97	70-135	5	20	mg/kg	09.17.19 12:52	
Diesel Range Organics (DRO)	<15.0	999	903	90	931	93	70-135	3	20	mg/kg	09.17.19 12:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		112		70-135	%	09.17.19 12:52
o-Terphenyl	102		102		70-135	%	09.17.19 12:52

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 636960

LT Environmental, Inc.

PLU CVX JV BS 15H

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

Seq Number: 3101780 Matrix: Solid Date Prep: 09.17.19

MB Sample Id: 7686307-1-BLK LCS Sample Id: 7686307-1-BKS LCSD Sample Id: 7686307-1-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	0.101	101	0.0940	94	70-130	7	35	mg/kg	09.17.19 22:40	
Toluene	<0.00200	0.100	0.102	102	0.0941	94	70-130	8	35	mg/kg	09.17.19 22:40	
Ethylbenzene	<0.00200	0.100	0.109	109	0.100	100	70-130	9	35	mg/kg	09.17.19 22:40	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.195	98	70-130	9	35	mg/kg	09.17.19 22:40	
o-Xylene	<0.00200	0.100	0.110	110	0.101	101	70-130	9	35	mg/kg	09.17.19 22:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		97		97		70-130	%	09.17.19 22:40
4-Bromofluorobenzene	103		111		108		70-130	%	09.17.19 22:40

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

Seq Number: 3101780 Matrix: Soil Date Prep: 09.17.19

Parent Sample Id: 636953-001 MS Sample Id: 636953-001 S MSD Sample Id: 636953-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0523	53	0.0689	69	70-130	27	35	mg/kg	09.17.19 23:20	X
Toluene	<0.00198	0.0992	0.0443	45	0.0608	61	70-130	31	35	mg/kg	09.17.19 23:20	X
Ethylbenzene	<0.00198	0.0992	0.0353	36	0.0515	52	70-130	37	35	mg/kg	09.17.19 23:20	XF
m,p-Xylenes	<0.00397	0.198	0.0655	33	0.0965	48	70-130	38	35	mg/kg	09.17.19 23:20	XF
o-Xylene	<0.00198	0.0992	0.0356	36	0.0521	52	70-130	38	35	mg/kg	09.17.19 23:20	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		101		70-130	%	09.17.19 23:20
4-Bromofluorobenzene	115		117		70-130	%	09.17.19 23:20

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

Chain of Custody

Work Order No: 636960

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTO
Address:	3300 North A St	Address:	3104 E. Greene St
City, State ZIP:	Midland TX 79705	City, State ZIP:	Carlsbad NM 88220
Phone:	432 236 3849	Email:	abyers@ltenv.com ydmoir@ltenv.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 15H	Turn Around	
Project Number:	012918136	Routine ☐	
Project Location	Rural Eddy County	Rush: 5 day	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-4880	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.2	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH12B	S	9/13/19	1120	6'	1		X	X	X	
	PH12C	S	9/13/19	1245	10'	1		X	X	X	

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 SiO2 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 **1631 / 245.1 / 7470 / 7471** : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75.00 will be applied to each project and a charge of $5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	Robert McClure	09/16/19 @1220	2 Robert McClure	Corbin J	9/16/19 12:40
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Inter-Office Shipment

IOS Number **48046**

Date/Time: 09/16/19 14:34
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Martha Castro
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636960-001	S	PH12B	09/13/19 11:20	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/27/19	JKR	GRO-DRO PHCC10C28 PI	
636960-001	S	PH12B	09/13/19 11:20	SW8021B	BTEX by EPA 8021B	09/20/19	09/27/19	JKR	BR4FBZ BZ BZME EBZ X	
636960-001	S	PH12B	09/13/19 11:20	E300_CL	Chloride by EPA 300	09/20/19	03/11/20	JKR	CL	
636960-002	S	PH12C	09/13/19 12:45	SW8021B	BTEX by EPA 8021B	09/20/19	09/27/19	JKR	BR4FBZ BZ BZME EBZ X	
636960-002	S	PH12C	09/13/19 12:45	E300_CL	Chloride by EPA 300	09/20/19	03/11/20	JKR	CL	
636960-002	S	PH12C	09/13/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/27/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 09/16/2019

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48046

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Martha Castro **Date Sent:** 09/16/2019 02:34 PM

Received By: **Date Received:**

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		
#2 *Shipping container in good condition?	___	
#3 *Samples received with appropriate temperature?	___	
#4 *Custody Seals intact on shipping container/ cooler?	___	
#5 *Custody Seals Signed and dated for Containers/coolers	___	
#6 *IOS present?	___	
#7 Any missing/extra samples?	___	
#8 IOS agrees with sample label(s)/matrix?	___	
#9 Sample matrix/ properties agree with IOS?	___	
#10 Samples in proper container/ bottle?	___	
#11 Samples properly preserved?	___	
#12 Sample container(s) intact?	___	
#13 Sufficient sample amount for indicated test(s)?	___	
#14 All samples received within hold time?	___	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

_____

Checklist reviewed by:

Date: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/16/2019 12:00:00 PM

Work Order #: 636960

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

Temperature Measuring device used : T NM007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**No**	
#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)?	**Yes**	Subbed to Xenco Midland
#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: Martha Castro Date: 09/16/2019

Checklist reviewed by: Jessica Kramer Date: 09/17/2019

Jessica Kramer

Analytical Report 638244

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU CVX JV BS 15H

012919136

02-OCT-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02-OCT-19

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

Reference: XENCO Report No(s): **638244**
PLU CVX JV BS 15H
Project Address: Eddy County

Dan Moir:

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) 638244. 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. 638244 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 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH13	S	09-26-19 08:00	1 ft	638244-001
PH13A	S	09-26-19 08:10	4 ft	638244-002
PH13B	S	09-26-19 09:00	12 ft	638244-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU CVX JV BS 15H

Project ID: *012919136*
Work Order Number(s): *638244*

Report Date: *02-OCT-19*
Date Received: *09/26/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3102739 BTEX by EPA 8021B

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

Certificate of Analysis Summary 638244

LT Environmental, Inc., Arvada, CO

Project Name: PLU CVX JV BS 15H

Project Id: 012919136
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu Sep-26-19 02:33 pm
Report Date: 02-OCT-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	638244-001		638244-002		638244-003					
	Field Id:	PH13		PH13A		PH13B					
	Depth:	1- ft		4- ft		12- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Sep-26-19 08:00		Sep-26-19 08:10		Sep-26-19 09:00					
BTEX by EPA 8021B	***Extracted:***	Sep-27-19 09:09		Sep-27-19 09:09		Sep-27-19 09:09					
	Analyzed:	Sep-27-19 12:15		Sep-27-19 13:34		Sep-27-19 13:54					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
Toluene		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
Ethylbenzene		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
m,p-Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200				
o-Xylene		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
Total Xylenes		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
Total BTEX		<0.00101	0.00101	<0.000996	0.000996	<0.000998	0.000998				
Chloride by EPA 300	***Extracted:***	Oct-01-19 13:10		Oct-01-19 13:10		Oct-01-19 13:10					
	Analyzed:	Oct-01-19 16:40		Oct-01-19 16:48		Oct-01-19 16:56					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		84.1	9.98	89.6	9.94	40.0	9.90				
TPH by SW8015 Mod	***Extracted:***	Sep-27-19 17:00		Sep-27-19 17:00		Sep-27-19 17:00					
	Analyzed:	Sep-28-19 05:09		Sep-28-19 05:29		Sep-30-19 09:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.2	50.2	<50.2	50.2				
Diesel Range Organics (DRO)		<49.9	49.9	<50.2	50.2	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.2	50.2	<50.2	50.2				
Total GRO-DRO		<49.9	49.9	<50.2	50.2	<50.2	50.2				
Total TPH		<49.9	49.9	<50.2	50.2	<50.2	50.2				

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-001	Date Collected:	09.26.19 08.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.01.19 13.10	Basis:	Wet Weight
Seq Number:	3103013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**84.1**	9.98	mg/kg	10.01.19 16.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 17.00	Basis:	Wet Weight
Seq Number:	3102809				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	09.28.19 05.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	09.28.19 05.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.28.19 05.09	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	09.28.19 05.09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.28.19 05.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.28.19 05.09	
o-Terphenyl	84-15-1	101	%	70-135	09.28.19 05.09	

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-001	Date Collected:	09.26.19 08.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 09.09	Basis:	Wet Weight
Seq Number:	3102739				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.27.19 12.15	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.27.19 12.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.27.19 12.15	
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.27.19 12.15	

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13A**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-002	Date Collected:	09.26.19 08.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.01.19 13.10	Basis:	Wet Weight
Seq Number:	3103013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**89.6**	9.94	mg/kg	10.01.19 16.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 17.00	Basis:	Wet Weight
Seq Number:	3102809				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.28.19 05.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.28.19 05.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.28.19 05.29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.28.19 05.29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.28.19 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	09.28.19 05.29	
o-Terphenyl	84-15-1	100	%	70-135	09.28.19 05.29	

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13A**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-002	Date Collected:	09.26.19 08.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 09.09	Basis:	Wet Weight
Seq Number:	3102739				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	09.27.19 13.34	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1
Total BTEX		<0.000996	0.000996	mg/kg	09.27.19 13.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	09.27.19 13.34	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.27.19 13.34	

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13B**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-003	Date Collected:	09.26.19 09.00	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.01.19 13.10	Basis:	Wet Weight
Seq Number:	3103013				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.0**	9.90	mg/kg	10.01.19 16.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 17.00	Basis:	Wet Weight
Seq Number:	3102809				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.30.19 09.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.30.19 09.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.30.19 09.43	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.30.19 09.43	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.30.19 09.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	09.30.19 09.43	
o-Terphenyl	84-15-1	75	%	70-135	09.30.19 09.43	

Certificate of Analytical Results 638244

LT Environmental, Inc., Arvada, CO

PLU CVX JV BS 15H

Sample Id:	**PH13B**	Matrix:	Soil	Date Received:	09.26.19 14.33
Lab Sample Id:	638244-003	Date Collected:	09.26.19 09.00	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	DTH	Date Prep:	09.27.19 09.09	Basis:	Wet Weight
Seq Number:	3102739				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	09.27.19 13.54	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1
Total BTEX		<0.000998	0.000998	mg/kg	09.27.19 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.27.19 13.54	
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.27.19 13.54	

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 638244

LT Environmental, Inc.

PLU CVX JV BS 15H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103013 — Matrix: Solid — Date Prep: 10.01.19
MB Sample Id: 7687223-1-BLK — LCS Sample Id: 7687223-1-BKS — LCSD Sample Id: 7687223-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	263	105	90-110	1	20	mg/kg	10.01.19 13:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103013 — Matrix: Soil — Date Prep: 10.01.19
Parent Sample Id: 638538-001 — MS Sample Id: 638538-001 S — MSD Sample Id: 638538-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3550	4030	8400	120	8390	120	90-110	0	20	mg/kg	10.01.19 14:11	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103013 — Matrix: Soil — Date Prep: 10.01.19
Parent Sample Id: 638538-011 — MS Sample Id: 638538-011 S — MSD Sample Id: 638538-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	44.8	201	260	107	260	107	90-110	0	20	mg/kg	10.01.19 15:48	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3102809 — Matrix: Solid — Date Prep: 09.27.19
MB Sample Id: 7687128-1-BLK — LCS Sample Id: 7687128-1-BKS — LCSD Sample Id: 7687128-1-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)	<50.0	1000	1140	114	1140	114	70-135	0	35	mg/kg	09.27.19 22:42	
Diesel Range Organics (DRO)	<50.0	1000	1260	126	1240	124	70-135	2	35	mg/kg	09.27.19 22:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		128		126		70-135	%	09.27.19 22:42
o-Terphenyl	109		113		115		70-135	%	09.27.19 22:42

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 638244

LT Environmental, Inc.

PLU CVX JV BS 15H

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3102809 | Matrix: Soil | Date Prep: 09.27.19
Parent Sample Id: 638392-005 | MS Sample Id: 638392-005 S | MSD Sample Id: 638392-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1100	109	1130	113	70-135	3	35	mg/kg	09.28.19 19:26	
Diesel Range Organics (DRO)	<50.3	1010	1220	121	1200	120	70-135	2	35	mg/kg	09.28.19 19:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		119		70-135	%	09.28.19 19:26
o-Terphenyl	118		111		70-135	%	09.28.19 19:26

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102739 | Matrix: Solid | Date Prep: 09.27.19
MB Sample Id: 7687079-1-BLK | LCS Sample Id: 7687079-1-BKS | LCSD Sample Id: 7687079-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0866	87	0.0905	91	70-130	4	35	mg/kg	09.27.19 11:16	
Toluene	<0.00100	0.100	0.0908	91	0.0972	97	70-130	7	35	mg/kg	09.27.19 11:16	
Ethylbenzene	<0.00100	0.100	0.110	110	0.116	116	71-129	5	35	mg/kg	09.27.19 11:16	
m,p-Xylenes	<0.00200	0.200	0.224	112	0.239	120	70-135	6	35	mg/kg	09.27.19 11:16	
o-Xylene	<0.00100	0.100	0.111	111	0.118	118	71-133	6	35	mg/kg	09.27.19 11:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		109		100		70-130	%	09.27.19 11:16
4-Bromofluorobenzene	97		118		114		70-130	%	09.27.19 11:16

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3102739 | Matrix: Soil | Date Prep: 09.27.19
Parent Sample Id: 638244-001 | MS Sample Id: 638244-001 S | MSD Sample Id: 638244-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0951	94	0.0929	93	70-130	2	35	mg/kg	09.27.19 12:35	
Toluene	<0.00101	0.101	0.107	106	0.105	105	70-130	2	35	mg/kg	09.27.19 12:35	
Ethylbenzene	<0.00101	0.101	0.117	116	0.113	113	71-129	3	35	mg/kg	09.27.19 12:35	
m,p-Xylenes	<0.00202	0.202	0.240	119	0.232	116	70-135	3	35	mg/kg	09.27.19 12:35	
o-Xylene	<0.00101	0.101	0.117	116	0.113	113	71-133	3	35	mg/kg	09.27.19 12:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		106		70-130	%	09.27.19 12:35
4-Bromofluorobenzene	120		117		70-130	%	09.27.19 12:35

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

Chain of Custody

Work Order No: 638224

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Crasbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager:	DAN MOIR	Bill to: (if different)	KYLE LITTRELL
Company Name:	LT ENVIRONMENTAL	Company Name:	XTO ENERGY
Address:	3300 NORTH A ST	Address:	3104 E GREENE ST
City, State ZIP:	MIDLAND TX 79705	City, State ZIP:	CARLSBAD NM 88220
Phone:	(432) 236-3849 Email:		abyers@ltenv.com & dmoir@ltenv.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 B515H	Turn Around	
Project Number:	012918136	Routine ☐	
Project Location	Eddy County	Rush: 5 DAY	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-4880	Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	4.4	Thermometer ID	T-NM-007
Received Intact:	Yes No	Correction Factor:	-0.2
Cooler Custody Seals:	Yes No N/A	Total Containers:	3
Sample Custody Seals:	Yes No N/A		

Temp Blank: Yes No Wet Ice: Yes No

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA300.0)
	PH13	S	9/26/19	0800	1'	1	X	X	X
	PH13A	S	9/26/19	0810	4'	1	X	X	X
	PH13B	S	9/26/19	0900	12'	1	X	X	X

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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 SiO2 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 1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		9/26/19 14:33	2		
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/26/2019 02:33:00 PM

Work Order #: 638244

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#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: Elizabeth McClellan Date: 09/26/2019

Checklist reviewed by: Jessica Kramer Date: 09/28/2019

Jessica Kramer

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APPENDIX B

June 23, 2023 *Closure Request*

ENSOLUM

June 23, 2023

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

Re: Closure Request
PLU CVX JV BS 015H
Incident Number NAB1821157574
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared this *Closure Request* as a follow-up to the *Deferral Request* dated December 6, 2019. This *Closure Request* provides an update to the soil sampling activities completed at the PLU CVX JV BS 015H (Site) in response to the New Mexico Oil Conservation Division (NMOCD) denial of the *Deferral Request*. In the denial, NMOCD indicated that the reported release location was incorrect and soil samples collected off-pad did not meet reclamation requirements. Based on the corrected Global Positioning System (GPS) coordinates and additional soil sampling activities described below, XTO is submitting this *Closure Request* and requesting no further action and closure for Incident Number NAB1821157574.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit A and D, Section 23 and 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (32.207958°, -103.842569°) and is associated with oil and gas exploration and production operations on Federal land managed by the Bureau of Land Management (BLM).

On July 12, 2018, internal corrosion of a flow line caused the release of approximately 2 barrels (bbls) of oil and 8 bbls of produced water. The flow line ran alongside Twin Wells road, the release impacted the surface of the road. The flow line was clamped, and a vacuum truck recovered approximately 0.5 bbls of oil and 1.5 bbls of produced water. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 26, 2018. The release was assigned Remediation Permit Number (RP) Number 2RP-4880 and Incident Number NAB1821157574.

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 that reportable releases that occurred prior to or near August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of 19.15.29 NMAC. Results from the characterization desktop review are presented on page

3 of the Form C-141, Site Assessment/Characterization. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well is New Mexico Office of the State Engineer (NMOSE) well C-04575, located approximately 0.45 miles northwest of the Site. The well was drilled to a depth of 105 feet during January 2022, and no groundwater was encountered. The well record is provided in Appendix A. All wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse to the Site is freshwater emergent wetland located approximately 980 feet southwest of 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. The Site is not underlain by unstable geology (low potential karst designation area). Site receptors are identified on Figure 1.

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

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

A reclamation requirement of 600 mg/kg chloride and 100 mg/kg TPH applies to the top 4 feet of the pasture areas 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.

BACKGROUND

Between December 2018 and September 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the July 12, 2018, crude oil and produced water release. Impacted soil was excavated to the extent possible; however, residual impacted soil was left in place for compliance with XTO safety policy regarding earth-moving activities within two feet of active pipelines and roads. This policy was enforced where impacted soil was identified within 2 feet of Twin Wells road in excavation sidewall sample SW03 and within 2 feet of an active gas line in excavation sidewall samples SW06 and SW07. The impacted soil left in-place was laterally and vertically delineated to below the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the *Deferral Request,* submitted to NMOCD on December 6, 2019.

On March 23, 2023, NMOCD denied the *Deferral Request* for Incident Number nAB1821157574 for the following reasons:

- OCD is unable to determine the location of the release. GPS coordinates through the report place the release location and test pit locations on the pad of the well site.

- Sample PH05B returned analytical results above the closure and reclamation standards. Remediation excavation appears to have been completed on the opposite side of the road based on the locations of the test pits and confirmation samples that are plotted on the figures.
- This release did not occur on a lined, bermed or otherwise contained exploration, development, production or storage site and it must meet the standards of Table I of 19.15.29.12 NMAC or other applicable remediation standards and restore and reclaim the area pursuant to 19.15.29.13 NMAC.

The GPS coordinates reported on the initial Form C-141 were for the PLU CVX JV BS 015H well pad not the location of the flow line release. The correct GPS coordinates for the release location are provided in the above Site description and in the attached updated Form C-141.

Upon review of the 2018/2019 soil sample analytical results, delineation sample PH05B and excavation sidewall samples SW03, SW06, SW07, and SW08 were identified with a TPH concentration greater than 100 mg/kg and/or a chloride concentration greater than 600 mg/kg in the top four feet.

ADDITIONAL SOIL SAMPLING ACTIVITIES

During June 2023, Ensolum personnel returned to the Site to complete additional soil sampling activities to assess for the presence or absence of residual impacted soil identified during 2018/2019 at the original PH05B, SW03, SW06, SW07, and SW08 soil sample locations. Delineation soil sample PH05B was collected via hand auger from a depth of 2 feet bgs at the original PH05B soil sample location. Composite sidewall samples SW03A, SW06A/SW06B, SW07A/SW07B, and SW08A were collected via hand auger from depths ranging from the ground surface to 8 feet bgs at the original SW03, SW06, SW07, and SW08 excavation sidewall sample locations.

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. Photographic documentation was completed during the Site visit and a photographic log is included in Appendix B.

Laboratory analytical results for soil samples PH05B, SW03A, SW06A/SW06B, SW07A/SW07B, and SW08A indicated that all COC concentrations were compliant with the Site Closure Criteria and the reclamation requirement in samples collected from the top four feet. The soil sample analytical results are summarized on Table 1 and the laboratory analytical reports are included as Appendix C.

CLOSURE REQUEST

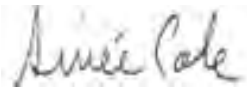
Excavation, delineation, and soil sampling activities were completed at the Site to address the impacted soil resulting from the July 12, 2018, crude oil and produced water release. Based on the additional soil sampling activities completed during June 2023 and laboratory analytical results for all final excavation and delineation soil samples compliant with the Site Closure Criteria and the reclamation requirement in soil samples collected from the top four feet, no further remediation is required. Additionally, it should be noted that the heavily trafficked Twin Wells road was paved with asphalt in the years since the release occurred.

Initial response efforts, excavation of impacted soil, and natural attenuation have mitigated impacts at this Site. Depth to groundwater has been determined to be greater than 100 feet bgs within 0.5 miles of the Site and no other sensitive receptors were identified near the release extent. XTO believes the

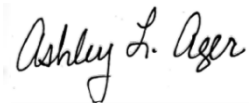
remedial actions completed are protective of human health, the environment, and groundwater and respectfully requests closure for Incident Number nAB1821157574.

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, P.G.
Program Director

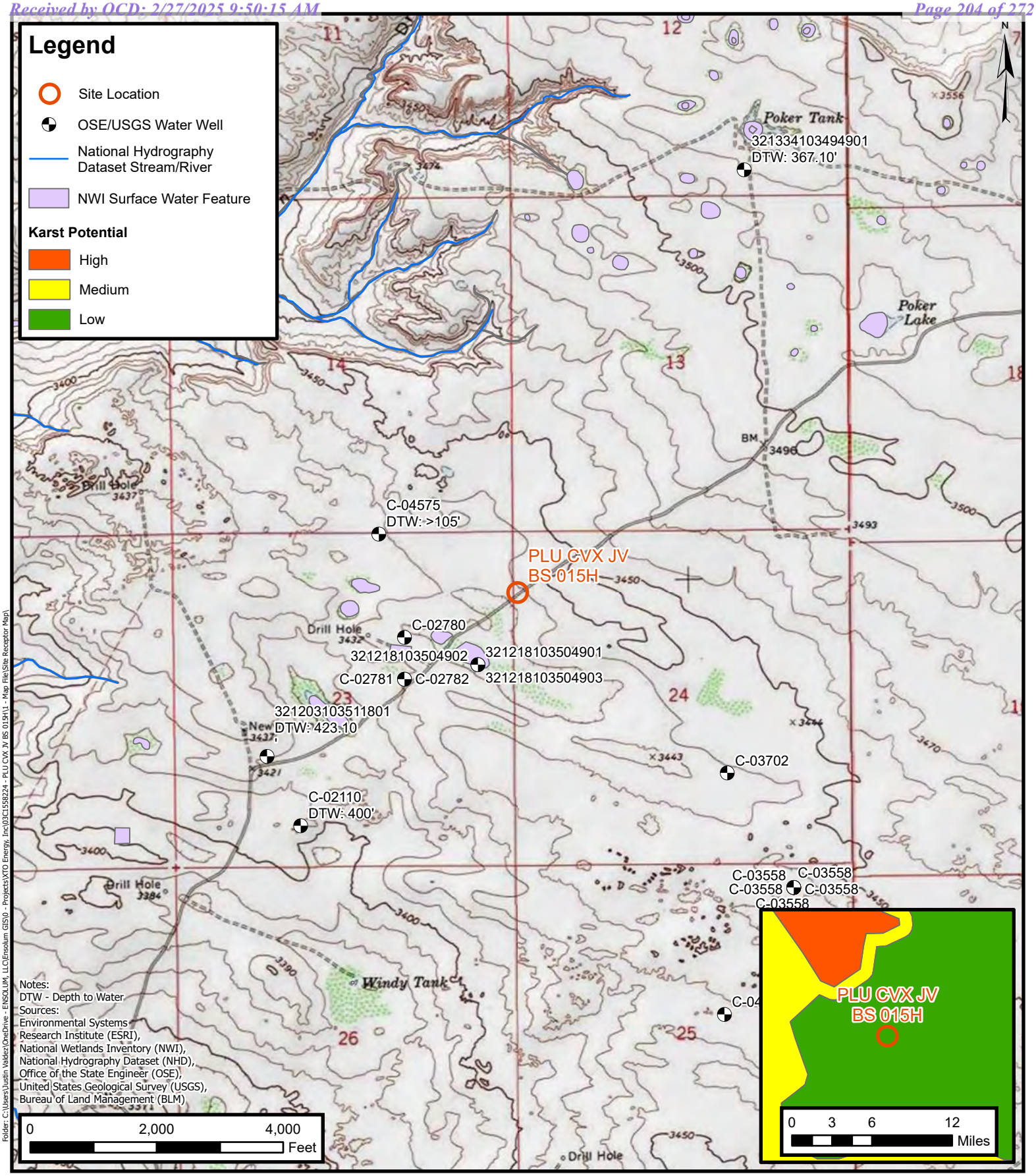
cc: Garrett Green, XTO
Shelby Pennington, XTO
Bureau of Land Management

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations (2018/2019 and 2023)
Figure 3	Excavation Soil Sample Locations (2018/2019 and 2023)
Table 1	Soil Sample Analytical Results (2018/2019 and 2023)
Appendix A	Referenced Well Records
Appendix B	Photographic Log (2023)
Appendix C	Laboratory Analytical Reports & Chain-of-Custody Documentation (2023)
Appendix D	NMOCD Notifications

ENSOLUM

FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558224 - PLU CVX JV BS 015H\1 - Map File\Site Receptor Map\

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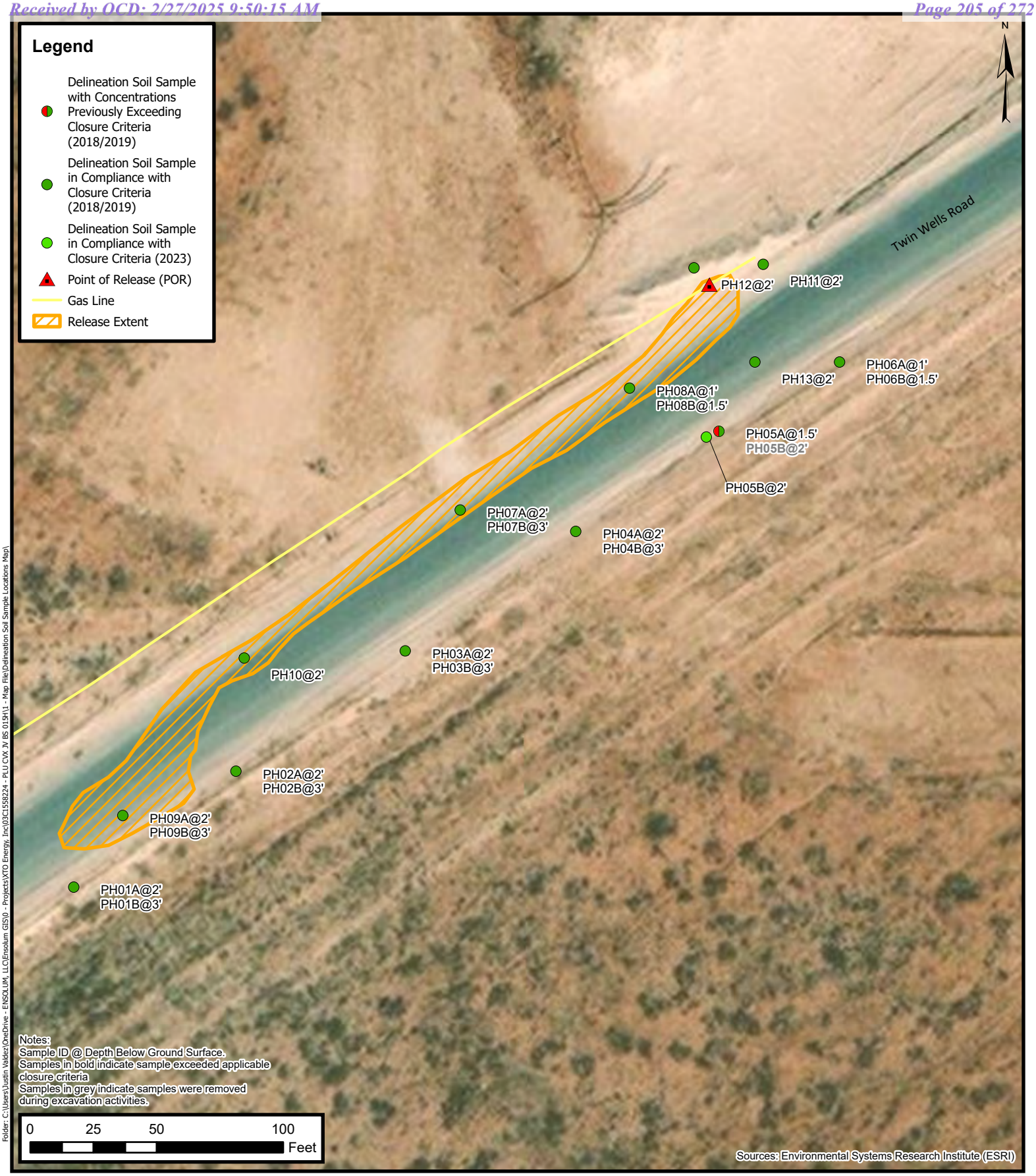
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East
Eddy County, New Mexico

FIGURE 1



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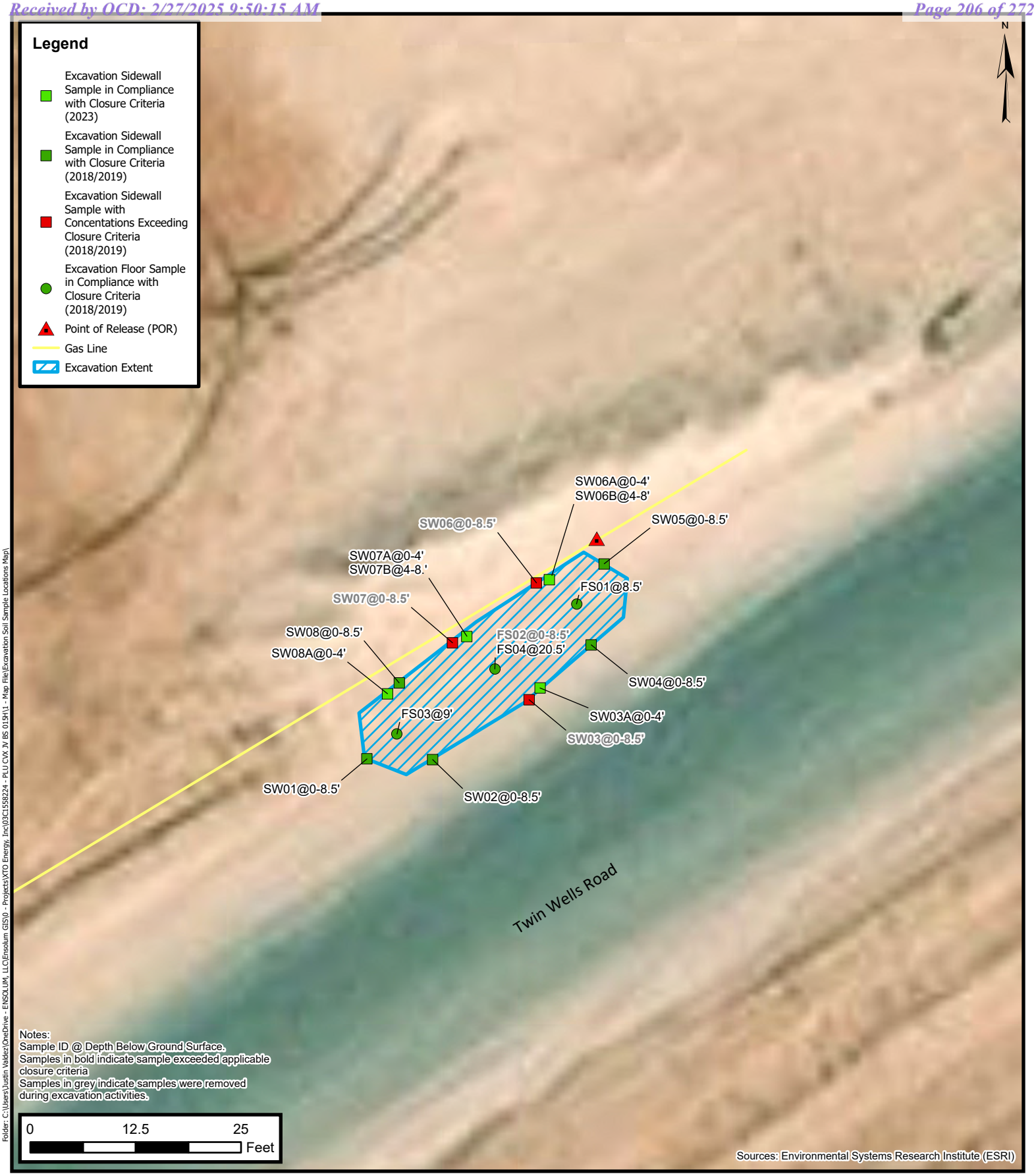
Delineation Soil Sample Locations

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East,
Eddy County, New Mexico

FIGURE 2



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Environmental, Engineering and Hydrogeologic Consultants

Excavation Soil Sample Locations

XTO Energy, Inc.
PLU CVX JV BS 015H
Incident Number: NAB1821157574
Unit A and D, Section 23 and 24, Township 24 South, Range 30 East,
Eddy County, New Mexico

FIGURE 3

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TABLES

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TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU CVX JV BS 015H
XTO Energy, Inc.
Eddy County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Delineation Soil Samples										
PH01A*	12/5/2018	2	<0.00200	0.00308	<15.0	<15.0	<15.0	<15.0	<15.0	37.5
PH01B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.1
PH02A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
PH02B*	12/5/2018	3	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
PH03A*	12/5/2018	2	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.98
PH03B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH04A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.5
PH04B*	12/5/2018	3	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	85.0
PH05A*	12/5/2018	1.5	<0.00199	<0.00199	<15.0	37.5	<15.0	37.5	37.5	103
PH05B*	12/5/2018	2	<0.00202	<0.00202	<15.0	183	106	183	**289**	69.4
BH05B*	6/6/2023	2	<0.00202	<0.00403	<49.9	<49.9	<49.9	<49.9	<49.9	36.8
PH06A*	12/5/2018	1	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	53.5
PH06B*	12/5/2018	1.5	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	59.4
PH07A*	12/5/2018	2	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	19.5
PH07B*	12/5/2018	3	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.0
PH08A*	12/5/2018	1	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	174
PH08B*	12/5/2018	1.5	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	329
PH09*	8/28/2019	2	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	184
PH09A*	8/28/2019	3	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	205
PH10*	8/28/2019	2	<0.00201	<0.00201	<24.9	<24.9	<24.9	<24.9	<24.9	232
PH10A*	8/28/2019	3	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	158
PH11*	8/28/2019	1	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	49.5
PH11A*	8/28/2019	2	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	52.6
PH12*	8/28/2019	1	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	46.0
PH12A*	8/28/2019	3	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	91.8
PH12B	9/13/2019	6	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	39.4
PH12C	9/13/2019	10	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	25.3
PH13*	9/26/2019	1	<0.00101	<0.00101	<49.9	<49.9	<49.9	<49.9	<49.9	84.1
PH13A	9/26/2019	4	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	89.6
PH13B	9/26/2019	12	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	40.0

ENSOLUM

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
PLU CVX JV BS 015H
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*	9/9/2019	0-8.5	<0.00100	<0.00100	<25.1	<25.1	<25.1	<25.1	<25.1	227
SW02*	9/9/2019	0-8.5	<0.00101	<0.00101	<25.1	<25.1	<25.1	<25.1	<25.1	558
SW03*	9/9/2019	0 8.5	<0.0992	4.95	288	1,060	<25.0	**1,350**	**1,350**	498
SW03A*	6/6/2023	0-4	<0.00201	<0.00402	<50.0	<50.0	<50.0	<50.0	<50.0	74.1
SW04*	9/9/2019	0-8.5	<0.0000099	<0.0000099	<25.0	<25.0	<25.0	<25.0	<25.0	107
SW05*	9/9/2019	0-8.5	<0.00101	0.00542	<25.0	<25.0	<25.0	<25.0	<25.0	94.5
SW06*	9/9/2019	0 8.5	0.246	25.5	1,050	3,000	<25.0	**4,050**	**4,050**	**1,340**
SW06A*	6/6/2023	0-4	<0.00200	<0.00400	<49.9	<49.9	<49.9	<49.9	<49.9	127
SW06B	6/15/2023	4-8	<0.00199	<0.00398	<49.8	<49.8	<49.8	<49.8	<49.8	95.7
SW07*	9/9/2019	0 8.5	<0.101	12.7	446	1,630	<25.0	**2,080**	**2,080**	**1,180**
SW07A*	6/6/2023	0-4	<0.00198	<0.00396	<50.0	<50.0	<50.0	<50.0	<50.0	108
SW07B	6/15/2023	4-8	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	97.5
SW08*	9/9/2019	0 8.5	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	**969**
SW08A*	6/6/2023	0-4	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	71.0
FS01	9/9/2019	8.5	<0.00100	0.0176	<25.1	49	<25.1	49.0	49.0	2,450
~~FS02~~	~~9/9/2019~~	~~10~~	~~<0.100~~	~~12.1~~	~~629~~	~~2,120~~	~~<25.1~~	~~**2,750**~~	~~**2,750**~~	~~16.9~~
FS03	9/9/2019	9	<0.00101	<0.00101	<25.0	<25.0	<25.0	<25.0	<25.0	<9.86
FS04	9/9/2019	20.5	<0.000996	<0.000996	<25.1	<25.1	<25.1	<25.1	<25.1	10.2

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

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

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

NMAC: New Mexico Administrative Code

~~Grey~~ text indicates soil sample removed during 2018/2019 excavation activities

Grey text indicates 2018/2019 soil sample that was re-sampled/replaced by 2023 soil sample.

* -indicates sample was collected in the top 4 feet of an area to be reclaimed after remediation is complete

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APPENDIX A

Referenced Well Records

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

OSE DIT JAN 24 2022 PM3:00

1. GENERAL AND WELL LOCATION

OSE POD NO. (WELL NO.)	WELL TAG ID NO.	OSE FILE NO(S).
POD1 (BH-01)	n/a	C-4575

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

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

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	32	12	38.03	N
	LONGITUDE	103	50	58.70	W

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

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

NW NE Sec. 23 T24S R30E, NMPM

2. DRILLING & CASING INFORMATION

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

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
1-4-2022	1-4-2022	temporary well material	105	n/a

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

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

DRILLING FLUID: ☐ AIR ☐ MUD ADDITIVES – SPECIFY:

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

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	105	±8.5	Boring- HSA	--	--	--	--

3. ANNULAR MATERIAL

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

FOR OSE INTERNAL USE

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

FILE NO. C-4575	POD NO. 1	TRN NO. 709414
LOCATION 2-1-1 24S-30E-23	WELL TAG ID NO. —	PAGE 1 OF 2

MON

OSE DII JAN 24 2022 PM 3:00

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1	1	Caliche, White, Dry	Y ✓N	
1	20	19	Sand, very fine grained, well graded, with caliche, Reddish Brown-Light Brown	Y N	
20	30	20	Caliche, consolidated with silt and some gravel, Off-White, Dry	Y ✓N	
30	50	20	Sand, very fine grained, well graded, with gravel, Light Brown	Y ✓N	
50	75	25	Sand, very fine grained, well graded, with gravel, Reddish Brown, slight moist	Y ✓N	
75	105	30	Sand, very fine grained, poorly graded, Reddish Brown, slight moist	Y ✓N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	
				Y N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA:

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

TOTAL ESTIMATED WELL YIELD (gpm): 0.00

5. TEST; RIG SUPERVISION

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

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

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

Shane Eldridge, Cameron Pruitt, Carmelo Trevino

6. SIGNATURE

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

Jack Atkins — Jackie D. Atkins — 1/21/2022

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

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

FILE NO. C-4573	POD NO. 1	TRN NO. 709414	
LOCATION 2-1-1 24S-30E-23		WELL TAG ID NO.	PAGE 2 OF 2

MON

ENSOLUM

APPENDIX B

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
PLU CVX JV BS 015H
Incident Number NAB1821157574

Photograph 1 Date: 5/30/2023
Description: View of area around pothole PH05.
View: Northeast

Photograph 2 Date: 5/30/2023
Description: View of historical excavation area.
View: West

Photograph 3 Date: 5/30/2023
Description: View of historical excavation area.
View: Northeast

Photograph 4 Date: 5/30/2023
Description: View of paved Twin Wells Road
View: Northwest

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/14/2023 3:19:25 PM

JOB DESCRIPTION

PLU BS 15H
SDG NUMBER 03C1558224

JOB NUMBER

890-4785-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

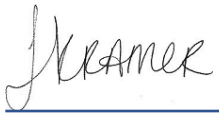
Eurofins Carlsbad

Job Notes

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

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

Authorization



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6/14/2023 3:19:25 PM

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

Client: Ensolum
Project/Site: PLU BS 15H

Laboratory Job ID: 890-4785-1
SDG: 03C1558224

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

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

Glossary

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

Case Narrative

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Job ID: 890-4785-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4785-1

Receipt
The samples were received on 6/6/2023 1:54 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW08A (890-4785-1), SW07A (890-4785-2), SW06A (890-4785-3), SW03A (890-4785-4) and BH05B (890-4785-5).

GC VOA
Method 8021B: The laboratory control sample duplicate (LCSD) for preparation batch 880-55037 and analytical batch 880-55385 recovered outside control limits for the following analytes: Benzene and Toluene. These analytes were biased high in the LCSD however, they were acceptable in the LCS and only one is required by method; therefore, the data have been reported.

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

GC Semi VOA
Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: (LCS 880-55158/2-A) and (LCSD 880-55158/3-A). Evidence of matrix interferences is not obvious.

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

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

Client Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW08A

Lab Sample ID: 890-4785-1
Matrix: Solid
Date Collected: 06/06/23 10:00
Date Received: 06/06/23 13:54
Sample Depth: 0-4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U *+	0.00199		mg/Kg		06/08/23 13:04	06/13/23 16:36	1
Toluene	<0.00199	U *+	0.00199		mg/Kg		06/08/23 13:04	06/13/23 16:36	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 16:36	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 16:36	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/08/23 13:04	06/13/23 16:36	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/08/23 13:04	06/13/23 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*06/08/23 13:04*	*06/13/23 16:36*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/08/23 13:04*	*06/13/23 16:36*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/14/23 09:58	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			06/13/23 12:05	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		06/09/23 14:01	06/13/23 02:29	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 02:29	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 02:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/13/23 02:29*	*1*
o-Terphenyl	*106*		*70 - 130*	*06/09/23 14:01*	*06/13/23 02:29*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**71.0**		4.98		mg/Kg			06/09/23 11:27	1

Client Sample ID: SW07A

Lab Sample ID: 890-4785-2
Matrix: Solid
Date Collected: 06/06/23 10:30
Date Received: 06/06/23 13:54
Sample Depth: 0-4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 16:56	1
Toluene	<0.00198	U *+	0.00198		mg/Kg		06/08/23 13:04	06/13/23 16:56	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 16:56	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 16:56	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		06/08/23 13:04	06/13/23 16:56	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		06/08/23 13:04	06/13/23 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*06/08/23 13:04*	*06/13/23 16:56*	*1*

Eurofins Carlsbad

Client Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW07A

Date Collected: 06/06/23 10:30
Date Received: 06/06/23 13:54
Sample Depth: 0-4

Lab Sample ID: 890-4785-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/08/23 13:04*	*06/13/23 16:56*	*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			06/14/23 09:58	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			06/13/23 12:05	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		06/09/23 14:01	06/13/23 02:50	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/09/23 14:01	06/13/23 02:50	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/09/23 14:01	06/13/23 02:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*92*		*70 - 130*	*06/09/23 14:01*	*06/13/23 02:50*	*1*
o-Terphenyl	*101*		*70 - 130*	*06/09/23 14:01*	*06/13/23 02:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**108**		5.02	mg/Kg			06/09/23 11:43	1

Client Sample ID: SW06A

Date Collected: 06/06/23 10:50
Date Received: 06/06/23 13:54
Sample Depth: 0-4

Lab Sample ID: 890-4785-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U *+	0.00200	mg/Kg		06/08/23 13:04	06/13/23 17:17	1
Toluene	<0.00200	U *+	0.00200	mg/Kg		06/08/23 13:04	06/13/23 17:17	1
Ethylbenzene	<0.00200	U	0.00200	mg/Kg		06/08/23 13:04	06/13/23 17:17	1
m-Xylene & p-Xylene	<0.00400	U	0.00400	mg/Kg		06/08/23 13:04	06/13/23 17:17	1
o-Xylene	<0.00200	U	0.00200	mg/Kg		06/08/23 13:04	06/13/23 17:17	1
Xylenes, Total	<0.00400	U	0.00400	mg/Kg		06/08/23 13:04	06/13/23 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:17*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:17*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400	mg/Kg			06/14/23 09:58	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			06/13/23 12:05	1

Client Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW06A

Lab Sample ID: 890-4785-3
Matrix: Solid
Date Collected: 06/06/23 10:50
Date Received: 06/06/23 13:54
Sample Depth: 0-4

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		06/09/23 14:01	06/13/23 03:10	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 03:10	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 03:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*96*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:10*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:10*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	127		5.05		mg/Kg			06/09/23 11:49	1

Client Sample ID: SW03A

Lab Sample ID: 890-4785-4
Matrix: Solid
Date Collected: 06/06/23 11:15
Date Received: 06/06/23 13:54
Sample Depth: 0-4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U *+	0.00201		mg/Kg		06/08/23 13:04	06/13/23 17:37	1
Toluene	<0.00201	U *+	0.00201		mg/Kg		06/08/23 13:04	06/13/23 17:37	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		06/08/23 13:04	06/13/23 17:37	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		06/08/23 13:04	06/13/23 17:37	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		06/08/23 13:04	06/13/23 17:37	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		06/08/23 13:04	06/13/23 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:37*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:37*	*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			06/14/23 09:58	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			06/13/23 12:05	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		06/09/23 14:01	06/13/23 03:30	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 03:30	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/13/23 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*98*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:30*	*1*
o-Terphenyl	*111*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:30*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW03A
Lab Sample ID: 890-4785-4

Date Collected: 06/06/23 11:15
Matrix: Solid
Date Received: 06/06/23 13:54
Sample Depth: 0-4

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74.1		5.00		mg/Kg			06/09/23 11:54	1

Client Sample ID: BH05B
Lab Sample ID: 890-4785-5

Date Collected: 06/06/23 10:20
Matrix: Solid
Date Received: 06/06/23 13:54
Sample Depth: 2'

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		06/08/23 13:04	06/13/23 17:58	1
Toluene	<0.00202	U *+	0.00202		mg/Kg		06/08/23 13:04	06/13/23 17:58	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		06/08/23 13:04	06/13/23 17:58	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		06/08/23 13:04	06/13/23 17:58	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		06/08/23 13:04	06/13/23 17:58	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		06/08/23 13:04	06/13/23 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:58*	*1*
1,4-Difluorobenzene (Surr)	*106*		*70 - 130*	*06/08/23 13:04*	*06/13/23 17:58*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			06/14/23 09:58	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			06/13/23 12:05	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 03:50	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 03:50	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/23 14:01	06/13/23 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*94*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:50*	*1*
o-Terphenyl	*107*		*70 - 130*	*06/09/23 14:01*	*06/13/23 03:50*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.8		4.96		mg/Kg			06/09/23 12:00	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Method: 8021B - Volatile Organic Compounds (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BFB1	DFBZ1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
890-4781-A-1-F MS	Matrix Spike	93	92
890-4781-A-1-G MSD	Matrix Spike Duplicate	108	102
890-4785-1	SW08A	99	98
890-4785-2	SW07A	91	98
890-4785-3	SW06A	93	96
890-4785-4	SW03A	90	101
890-4785-5	BH05B	97	106
LCS 880-55037/1-A	Lab Control Sample	97	105
LCSD 880-55037/2-A	Lab Control Sample Dup	96	102
MB 880-55037/5-A	Method Blank	90	111

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)
880-29311-A-121-C MS	Matrix Spike	99	94
880-29311-A-121-D MSD	Matrix Spike Duplicate	101	95
890-4785-1	SW08A	97	106
890-4785-2	SW07A	92	101
890-4785-3	SW06A	96	107
890-4785-4	SW03A	98	111
890-4785-5	BH05B	94	107
LCS 880-55158/2-A	Lab Control Sample	24 S1-	20 S1-
LCSD 880-55158/3-A	Lab Control Sample Dup	24 S1-	19 S1-
MB 880-55158/1-A	Method Blank	97	118

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55037/5-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55037

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/08/23 13:04	06/13/23 14:24	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/08/23 13:04	06/13/23 14:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*
1,4-Difluorobenzene (Surr)	*111*		*70 - 130*	*06/08/23 13:04*	*06/13/23 14:24*	*1*

Lab Sample ID: LCS 880-55037/1-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1164		mg/Kg		116	70 - 130		
Toluene			0.100	0.1157		mg/Kg		116	70 - 130		
Ethylbenzene			0.100	0.1040		mg/Kg		104	70 - 130		
m-Xylene & p-Xylene			0.200	0.1933		mg/Kg		97	70 - 130		
o-Xylene			0.100	0.09140		mg/Kg		91	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 880-55037/2-A
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55037

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1440	*+	mg/Kg		144	70 - 130	21	35
Toluene			0.100	0.1378	*+	mg/Kg		138	70 - 130	17	35
Ethylbenzene			0.100	0.1158		mg/Kg		116	70 - 130	11	35
m-Xylene & p-Xylene			0.200	0.2210		mg/Kg		111	70 - 130	13	35
o-Xylene			0.100	0.1050		mg/Kg		105	70 - 130	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: 890-4781-A-1-F MS
Matrix: Solid
Analysis Batch: 55385

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00199	U *+	0.101	0.1061		mg/Kg		105	70 - 130		
Toluene	<0.00199	U *+	0.101	0.1028		mg/Kg		102	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

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

Lab Sample ID: 890-4781-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55385 — **Prep Batch: 55037**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00199	U	0.101	0.07489		mg/Kg		74	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.202	0.1372	F1	mg/Kg		68	70 - 130
o-Xylene	<0.00199	U F1	0.101	0.06696	F1	mg/Kg		66	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
1,4-Difluorobenzene (Surr)	*92*		*70 - 130*

Lab Sample ID: 890-4781-A-1-G MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55385 — **Prep Batch: 55037**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U *+	0.100	0.1063		mg/Kg		106	70 - 130	0	35
Toluene	<0.00199	U *+	0.100	0.1059		mg/Kg		106	70 - 130	3	35
Ethylbenzene	<0.00199	U	0.100	0.08181		mg/Kg		82	70 - 130	9	35
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.1631		mg/Kg		81	70 - 130	17	35
o-Xylene	<0.00199	U F1	0.100	0.07958		mg/Kg		79	70 - 130	17	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

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

Lab Sample ID: MB 880-55158/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55236 — **Prep Batch: 55158**

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		06/09/23 14:01	06/12/23 23:24	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/23 14:01	06/12/23 23:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*97*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*
o-Terphenyl	*118*		*70 - 130*	*06/09/23 14:01*	*06/12/23 23:24*	*1*

Lab Sample ID: LCS 880-55158/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55236 — **Prep Batch: 55158**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10			1000	905.0		mg/Kg		90	70 - 130
Diesel Range Organics (Over C10-C28)			1000	982.0		mg/Kg		98	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

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

Lab Sample ID: LCS 880-55158/2-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55158

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	24	S1-	70 - 130
o-Terphenyl	20	S1-	70 - 130

Lab Sample ID: LCSD 880-55158/3-A
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55158

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	890.2		mg/Kg		89	70 - 130	2	20
Diesel Range Organics (Over C10-C28)			1000	970.1		mg/Kg		97	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1-Chlorooctane	24	S1-	70 - 130
o-Terphenyl	19	S1-	70 - 130

Lab Sample ID: 880-29311-A-121-C MS
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55158

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	1017		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	1088		mg/Kg		107	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	99		70 - 130
o-Terphenyl	94		70 - 130

Lab Sample ID: 880-29311-A-121-D MSD
Matrix: Solid
Analysis Batch: 55236

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55158

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	999	1035		mg/Kg		100	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	<49.9	U	999	1101		mg/Kg		108	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	101		70 - 130
o-Terphenyl	95		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55022/1-A
Matrix: Solid
Analysis Batch: 55120

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			06/09/23 10:37	1

Lab Sample ID: LCS 880-55022/2-A
Matrix: Solid
Analysis Batch: 55120

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	248.0		mg/Kg		99	90 - 110		

Lab Sample ID: LCSD 880-55022/3-A
Matrix: Solid
Analysis Batch: 55120

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	250.6		mg/Kg		100	90 - 110	1	20

Lab Sample ID: 890-4786-A-2-C MS
Matrix: Solid
Analysis Batch: 55120

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	284		249	538.7		mg/Kg		102	90 - 110		

Lab Sample ID: 890-4786-A-2-D MSD
Matrix: Solid
Analysis Batch: 55120

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	284		249	535.5		mg/Kg		101	90 - 110	1	20

QC Association Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

GC VOA

Prep Batch: 55037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	5035	
890-4785-2	SW07A	Total/NA	Solid	5035	
890-4785-3	SW06A	Total/NA	Solid	5035	
890-4785-4	SW03A	Total/NA	Solid	5035	
890-4785-5	BH05B	Total/NA	Solid	5035	
MB 880-55037/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	5035	
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	8021B	55037
890-4785-2	SW07A	Total/NA	Solid	8021B	55037
890-4785-3	SW06A	Total/NA	Solid	8021B	55037
890-4785-4	SW03A	Total/NA	Solid	8021B	55037
890-4785-5	BH05B	Total/NA	Solid	8021B	55037
MB 880-55037/5-A	Method Blank	Total/NA	Solid	8021B	55037
LCS 880-55037/1-A	Lab Control Sample	Total/NA	Solid	8021B	55037
LCSD 880-55037/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55037
890-4781-A-1-F MS	Matrix Spike	Total/NA	Solid	8021B	55037
890-4781-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55037

Analysis Batch: 55492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	Total BTEX	
890-4785-2	SW07A	Total/NA	Solid	Total BTEX	
890-4785-3	SW06A	Total/NA	Solid	Total BTEX	
890-4785-4	SW03A	Total/NA	Solid	Total BTEX	
890-4785-5	BH05B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 55158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	8015NM Prep	
890-4785-2	SW07A	Total/NA	Solid	8015NM Prep	
890-4785-3	SW06A	Total/NA	Solid	8015NM Prep	
890-4785-4	SW03A	Total/NA	Solid	8015NM Prep	
890-4785-5	BH05B	Total/NA	Solid	8015NM Prep	
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	8015B NM	55158
890-4785-2	SW07A	Total/NA	Solid	8015B NM	55158

QC Association Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

GC Semi VOA (Continued)

Analysis Batch: 55236 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-3	SW06A	Total/NA	Solid	8015B NM	55158
890-4785-4	SW03A	Total/NA	Solid	8015B NM	55158
890-4785-5	BH05B	Total/NA	Solid	8015B NM	55158
MB 880-55158/1-A	Method Blank	Total/NA	Solid	8015B NM	55158
LCS 880-55158/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55158
LCSD 880-55158/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55158
880-29311-A-121-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55158
880-29311-A-121-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55158

Analysis Batch: 55415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Total/NA	Solid	8015 NM	
890-4785-2	SW07A	Total/NA	Solid	8015 NM	
890-4785-3	SW06A	Total/NA	Solid	8015 NM	
890-4785-4	SW03A	Total/NA	Solid	8015 NM	
890-4785-5	BH05B	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 55022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Soluble	Solid	DI Leach	
890-4785-2	SW07A	Soluble	Solid	DI Leach	
890-4785-3	SW06A	Soluble	Solid	DI Leach	
890-4785-4	SW03A	Soluble	Solid	DI Leach	
890-4785-5	BH05B	Soluble	Solid	DI Leach	
MB 880-55022/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55022/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55022/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4786-A-2-C MS	Matrix Spike	Soluble	Solid	DI Leach	
890-4786-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 55120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4785-1	SW08A	Soluble	Solid	300.0	55022
890-4785-2	SW07A	Soluble	Solid	300.0	55022
890-4785-3	SW06A	Soluble	Solid	300.0	55022
890-4785-4	SW03A	Soluble	Solid	300.0	55022
890-4785-5	BH05B	Soluble	Solid	300.0	55022
MB 880-55022/1-A	Method Blank	Soluble	Solid	300.0	55022
LCS 880-55022/2-A	Lab Control Sample	Soluble	Solid	300.0	55022
LCSD 880-55022/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55022
890-4786-A-2-C MS	Matrix Spike	Soluble	Solid	300.0	55022
890-4786-A-2-D MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	55022

Lab Chronicle

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW08A
Date Collected: 06/06/23 10:00
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 16:36	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55492	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55415	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 02:29	AJ	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 11:27	CH	EET MID

Client Sample ID: SW07A
Date Collected: 06/06/23 10:30
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 16:56	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55492	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55415	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 02:50	AJ	EET MID
Soluble	Leach	DI Leach			4.98 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 11:43	CH	EET MID

Client Sample ID: SW06A
Date Collected: 06/06/23 10:50
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 17:17	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55492	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55415	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 03:10	AJ	EET MID
Soluble	Leach	DI Leach			4.95 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 11:49	CH	EET MID

Client Sample ID: SW03A
Date Collected: 06/06/23 11:15
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.97 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 17:37	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55492	06/14/23 09:58	AJ	EET MID

Lab Chronicle

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Client Sample ID: SW03A
Date Collected: 06/06/23 11:15
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-4
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			55415	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 03:30	AJ	EET MID
Soluble	Leach	DI Leach			5 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 11:54	CH	EET MID

Client Sample ID: BH05B
Date Collected: 06/06/23 10:20
Date Received: 06/06/23 13:54

Lab Sample ID: 890-4785-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	55037	06/08/23 13:04	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55385	06/13/23 17:58	AJ	EET MID
Total/NA	Analysis	Total BTEX		1			55492	06/14/23 09:58	AJ	EET MID
Total/NA	Analysis	8015 NM		1			55415	06/13/23 12:05	AJ	EET MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	55158	06/09/23 14:01	AJ	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55236	06/13/23 03:50	AJ	EET MID
Soluble	Leach	DI Leach			5.04 g	50 mL	55022	06/08/23 09:45	KS	EET MID
Soluble	Analysis	300.0		1			55120	06/09/23 12:00	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 BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

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 BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

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 BS 15H

Job ID: 890-4785-1
SDG: 03C1558224

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4785-1	SW08A	Solid	06/06/23 10:00	06/06/23 13:54	0-4
890-4785-2	SW07A	Solid	06/06/23 10:30	06/06/23 13:54	0-4
890-4785-3	SW06A	Solid	06/06/23 10:50	06/06/23 13:54	0-4
890-4785-4	SW03A	Solid	06/06/23 11:15	06/06/23 13:54	0-4
890-4785-5	BH05B	Solid	06/06/23 10:20	06/06/23 13:54	2'

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

Work Order Comments

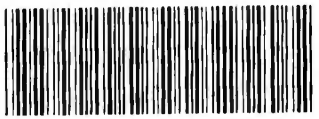
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU BS 15H	Turn Around	☑ Routine ☐ Rush
Project Number:	03C1558224	Due Date:	
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	TAM 007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	3.2
Total Containers:		Corrected Temperature:	3.0

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
SW08A	S	6/6/23	10:00	0-4	C	1				
SW07A	S	"	10:30	0-4	C	1				
SW06A	S	"	10:50	0-4	C	1				
SW03A	S	"	11:15	0-4	C	1				
BH05B	S	"	10:20	2'	G	1			CW	



Parameters

Preservative Codes

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

Sample Comments

Incident ID: NAB1821157574

Cost Center: 1140041001

AFE:

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

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

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

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4785-1
SDG Number: 03C1558224

Login Number: 4785
List Number: 1
Creator: Stutzman, Amanda

List Source: Eurofins Carlsbad

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

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4785-1
SDG Number: 03C1558224

Login Number: 4785
List Number: 2
Creator: Rodriguez, Leticia

List Source: Eurofins Midland
List Creation: 06/08/23 10:12 AM

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

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/21/2023 9:52:54 AM Revision 1

JOB DESCRIPTION

PLU BS 15H
SDG NUMBER 03C1558224

JOB NUMBER

890-4828-1

Eurofins Carlsbad
1089 N Canal St.
Carlsbad NM 88220

See page two for job notes and contact information.

my EOL

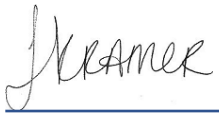
Eurofins Carlsbad

Job Notes

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

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

Authorization



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6/21/2023 9:52:54 AM
Revision 1

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

Client: Ensolum
Project/Site: PLU BS 15H

Laboratory Job ID: 890-4828-1
SDG: 03C1558224

Table of Contents

Definitions/Glossary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Qualifiers

GC VOA

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
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 BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Job ID: 890-4828-1

Laboratory: Eurofins Carlsbad

Narrative

Job Narrative
890-4828-1

REVISION

The report being provided is a revision of the original report sent on 6/20/2023. The report (revision 1) is being revised due to Per client email, correct sample depth to 4-8'.

Receipt
The samples were received on 6/15/2023 3:40 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C

Receipt Exceptions
The following samples were received and analyzed from an unpreserved bulk soil jar: SW06B (890-4828-1) and SW07B (890-4828-2).

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

GC Semi VOA
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 BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Client Sample ID: SW06B
Date Collected: 06/15/23 13:45
Date Received: 06/15/23 15:40
Sample Depth: 4' - 8'

Lab Sample ID: 890-4828-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:16	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:16	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:16	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/19/23 10:08	06/20/23 19:16	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:16	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/19/23 10:08	06/20/23 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*75*		*70 - 130*	*06/19/23 10:08*	*06/20/23 19:16*	*1*
1,4-Difluorobenzene (Surr)	*105*		*70 - 130*	*06/19/23 10:08*	*06/20/23 19:16*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			06/20/23 20:29	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			06/20/23 16:16	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		06/19/23 09:05	06/19/23 14:20	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		06/19/23 09:05	06/19/23 14:20	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		06/19/23 09:05	06/19/23 14:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*06/19/23 09:05*	*06/19/23 14:20*	*1*
o-Terphenyl	*98*		*70 - 130*	*06/19/23 09:05*	*06/19/23 14:20*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**95.7**		5.03		mg/Kg			06/19/23 12:47	1

Client Sample ID: SW07B
Date Collected: 06/15/23 14:05
Date Received: 06/15/23 15:40
Sample Depth: 4' - 8'

Lab Sample ID: 890-4828-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:37	1
Toluene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:37	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:37	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		06/19/23 10:08	06/20/23 19:37	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		06/19/23 10:08	06/20/23 19:37	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		06/19/23 10:08	06/20/23 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*	*06/19/23 10:08*	*06/20/23 19:37*	*1*

Client Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Client Sample ID: SW07B
Date Collected: 06/15/23 14:05
Date Received: 06/15/23 15:40
Sample Depth: 4' - 8'

Lab Sample ID: 890-4828-2
Matrix: Solid

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Difluorobenzene (Surr)	*89*		*70 - 130*	*06/19/23 10:08*	*06/20/23 19:37*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398	mg/Kg			06/20/23 20:29	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			06/20/23 16:16	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9	mg/Kg		06/19/23 09:05	06/19/23 14:45	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9	mg/Kg		06/19/23 09:05	06/19/23 14:45	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9	mg/Kg		06/19/23 09:05	06/19/23 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*90*		*70 - 130*	*06/19/23 09:05*	*06/19/23 14:45*	*1*
o-Terphenyl	*99*		*70 - 130*	*06/19/23 09:05*	*06/19/23 14:45*	*1*

Method: EPA 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**97.5**		4.98	mg/Kg			06/19/23 13:02	1

Surrogate Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

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)
880-29650-A-21-C MS	Matrix Spike	102	107
880-29650-A-21-D MSD	Matrix Spike Duplicate	99	107
890-4828-1	SW06B	75	105
890-4828-2	SW07B	84	89
LCS 880-55809/1-A	Lab Control Sample	78	120
LCSD 880-55809/2-A	Lab Control Sample Dup	100	110
MB 880-55809/5-A	Method Blank	70	98

Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		1CO1	OTPH1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
880-29650-A-97-C MS	Matrix Spike	94	91
880-29650-A-97-D MSD	Matrix Spike Duplicate	92	89
890-4828-1	SW06B	90	98
890-4828-2	SW07B	90	99
LCS 880-55784/2-A	Lab Control Sample	84	95
LCSD 880-55784/3-A	Lab Control Sample Dup	78	81
MB 880-55784/1-A	Method Blank	93	103

Surrogate Legend

1CO = 1-Chlorooctane
OTPH = o-Terphenyl

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-55809/5-A
Matrix: Solid
Analysis Batch: 55895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55809

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		06/19/23 10:08	06/20/23 11:59	1
Toluene	<0.00200	U	0.00200		mg/Kg		06/19/23 10:08	06/20/23 11:59	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		06/19/23 10:08	06/20/23 11:59	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		06/19/23 10:08	06/20/23 11:59	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		06/19/23 10:08	06/20/23 11:59	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		06/19/23 10:08	06/20/23 11:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*70*		*70 - 130*	*06/19/23 10:08*	*06/20/23 11:59*	*1*
1,4-Difluorobenzene (Surr)	*98*		*70 - 130*	*06/19/23 10:08*	*06/20/23 11:59*	*1*

Lab Sample ID: LCS 880-55809/1-A
Matrix: Solid
Analysis Batch: 55895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55809

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			0.100	0.1243		mg/Kg		124	70 - 130		
Toluene			0.100	0.09529		mg/Kg		95	70 - 130		
Ethylbenzene			0.100	0.08568		mg/Kg		86	70 - 130		
m-Xylene & p-Xylene			0.200	0.1683		mg/Kg		84	70 - 130		
o-Xylene			0.100	0.08304		mg/Kg		83	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*78*		*70 - 130*
1,4-Difluorobenzene (Surr)	*120*		*70 - 130*

Lab Sample ID: LCSD 880-55809/2-A
Matrix: Solid
Analysis Batch: 55895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55809

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			0.100	0.1229		mg/Kg		123	70 - 130	1	35
Toluene			0.100	0.1042		mg/Kg		104	70 - 130	9	35
Ethylbenzene			0.100	0.1059		mg/Kg		106	70 - 130	21	35
m-Xylene & p-Xylene			0.200	0.2164		mg/Kg		108	70 - 130	25	35
o-Xylene			0.100	0.1069		mg/Kg		107	70 - 130	25	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,4-Difluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 880-29650-A-21-C MS
Matrix: Solid
Analysis Batch: 55895

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55809

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene	<0.00202	U	0.0996	0.1004		mg/Kg		101	70 - 130		
Toluene	<0.00202	U	0.0996	0.09097		mg/Kg		91	70 - 130		

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

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

Lab Sample ID: 880-29650-A-21-C MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55895 — **Prep Batch: 55809**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.0996	0.09472		mg/Kg		95	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.199	0.1895		mg/Kg		95	70 - 130
o-Xylene	<0.00202	U	0.0996	0.09265		mg/Kg		93	70 - 130

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

Lab Sample ID: 880-29650-A-21-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55895 — **Prep Batch: 55809**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U	0.0990	0.09579		mg/Kg		97	70 - 130	5	35
Toluene	<0.00202	U	0.0990	0.08561		mg/Kg		86	70 - 130	6	35
Ethylbenzene	<0.00202	U	0.0990	0.08948		mg/Kg		90	70 - 130	6	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1810		mg/Kg		91	70 - 130	5	35
o-Xylene	<0.00202	U	0.0990	0.08796		mg/Kg		89	70 - 130	5	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,4-Difluorobenzene (Surr)	*107*		*70 - 130*

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

Lab Sample ID: MB 880-55784/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55770 — **Prep Batch: 55784**

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		06/19/23 08:00	06/19/23 08:22	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0	mg/Kg		06/19/23 08:00	06/19/23 08:22	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0	mg/Kg		06/19/23 08:00	06/19/23 08:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctane	*93*		*70 - 130*	*06/19/23 08:00*	*06/19/23 08:22*	*1*
o-Terphenyl	*103*		*70 - 130*	*06/19/23 08:00*	*06/19/23 08:22*	*1*

Lab Sample ID: LCS 880-55784/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 55770 — **Prep Batch: 55784**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	856.5		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	1000	882.6		mg/Kg		88	70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

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

Lab Sample ID: LCS 880-55784/2-A
Matrix: Solid
Analysis Batch: 55770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55784

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	95		70 - 130

Lab Sample ID: LCSD 880-55784/3-A
Matrix: Solid
Analysis Batch: 55770

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 55784

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10			1000	901.0		mg/Kg		90	70 - 130	5	20
Diesel Range Organics (Over C10-C28)			1000	944.0		mg/Kg		94	70 - 130	7	20

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

Lab Sample ID: 880-29650-A-97-C MS
Matrix: Solid
Analysis Batch: 55770

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 55784

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	992.2		mg/Kg		97	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	998	972.0		mg/Kg		95	70 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
1-Chlorooctane	94		70 - 130
o-Terphenyl	91		70 - 130

Lab Sample ID: 880-29650-A-97-D MSD
Matrix: Solid
Analysis Batch: 55770

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 55784

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	997	963.3		mg/Kg		94	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<49.8	U	997	947.5		mg/Kg		92	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1-Chlorooctane	92		70 - 130
o-Terphenyl	89		70 - 130

QC Sample Results

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-55804/1-A
Matrix: Solid
Analysis Batch: 55837

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			06/19/23 12:31	1

Lab Sample ID: LCS 880-55804/2-A
Matrix: Solid
Analysis Batch: 55837

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			250	240.6		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-55804/3-A
Matrix: Solid
Analysis Batch: 55837

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	240.2		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 890-4828-1 MS
Matrix: Solid
Analysis Batch: 55837

Client Sample ID: SW06B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	95.7		252	370.2		mg/Kg		109	90 - 110		

Lab Sample ID: 890-4828-1 MSD
Matrix: Solid
Analysis Batch: 55837

Client Sample ID: SW06B
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	95.7		252	370.8		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

GC VOA

Prep Batch: 55809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	5035	
890-4828-2	SW07B	Total/NA	Solid	5035	
MB 880-55809/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-55809/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-55809/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-29650-A-21-C MS	Matrix Spike	Total/NA	Solid	5035	
880-29650-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 55895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	8021B	55809
890-4828-2	SW07B	Total/NA	Solid	8021B	55809
MB 880-55809/5-A	Method Blank	Total/NA	Solid	8021B	55809
LCS 880-55809/1-A	Lab Control Sample	Total/NA	Solid	8021B	55809
LCSD 880-55809/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	55809
880-29650-A-21-C MS	Matrix Spike	Total/NA	Solid	8021B	55809
880-29650-A-21-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	55809

Analysis Batch: 55952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	Total BTEX	
890-4828-2	SW07B	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 55770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	8015B NM	55784
890-4828-2	SW07B	Total/NA	Solid	8015B NM	55784
MB 880-55784/1-A	Method Blank	Total/NA	Solid	8015B NM	55784
LCS 880-55784/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	55784
LCSD 880-55784/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	55784
880-29650-A-97-C MS	Matrix Spike	Total/NA	Solid	8015B NM	55784
880-29650-A-97-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	55784

Prep Batch: 55784

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	8015NM Prep	
890-4828-2	SW07B	Total/NA	Solid	8015NM Prep	
MB 880-55784/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-55784/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-55784/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-29650-A-97-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-29650-A-97-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 55948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Total/NA	Solid	8015 NM	
890-4828-2	SW07B	Total/NA	Solid	8015 NM	

QC Association Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

HPLC/IC

Leach Batch: 55804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Soluble	Solid	DI Leach	
890-4828-2	SW07B	Soluble	Solid	DI Leach	
MB 880-55804/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-55804/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-55804/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-4828-1 MS	SW06B	Soluble	Solid	DI Leach	
890-4828-1 MSD	SW06B	Soluble	Solid	DI Leach	

Analysis Batch: 55837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
890-4828-1	SW06B	Soluble	Solid	300.0	55804
890-4828-2	SW07B	Soluble	Solid	300.0	55804
MB 880-55804/1-A	Method Blank	Soluble	Solid	300.0	55804
LCS 880-55804/2-A	Lab Control Sample	Soluble	Solid	300.0	55804
LCSD 880-55804/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	55804
890-4828-1 MS	SW06B	Soluble	Solid	300.0	55804
890-4828-1 MSD	SW06B	Soluble	Solid	300.0	55804

Lab Chronicle

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Client Sample ID: SW06B
Date Collected: 06/15/23 13:45
Date Received: 06/15/23 15:40

Lab Sample ID: 890-4828-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	55809	06/19/23 10:08	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55895	06/20/23 19:16	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55952	06/20/23 20:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			55948	06/20/23 16:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	55784	06/19/23 09:05	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55770	06/19/23 14:20	SM	EET MID
Soluble	Leach	DI Leach			4.97 g	50 mL	55804	06/19/23 09:47	SMC	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	55837	06/19/23 12:47	CH	EET MID

Client Sample ID: SW07B
Date Collected: 06/15/23 14:05
Date Received: 06/15/23 15:40

Lab Sample ID: 890-4828-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	55809	06/19/23 10:08	EL	EET MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	55895	06/20/23 19:37	SM	EET MID
Total/NA	Analysis	Total BTEX		1			55952	06/20/23 20:29	SM	EET MID
Total/NA	Analysis	8015 NM		1			55948	06/20/23 16:16	SM	EET MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	55784	06/19/23 09:05	AM	EET MID
Total/NA	Analysis	8015B NM		1	1 uL	1 uL	55770	06/19/23 14:45	SM	EET MID
Soluble	Leach	DI Leach			5.02 g	50 mL	55804	06/19/23 09:47	SMC	EET MID
Soluble	Analysis	300.0		1	10 mL	10 mL	55837	06/19/23 13:02	CH	EET MID

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

Accreditation/Certification Summary

Client: Ensolum
Project/Site: PLU BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

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 BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

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 BS 15H

Job ID: 890-4828-1
SDG: 03C1558224

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
890-4828-1	SW06B	Solid	06/15/23 13:45	06/15/23 15:40	4' - 8'
890-4828-2	SW07B	Solid	06/15/23 14:05	06/15/23 15:40	4' - 8'

eurofins | Environment Testing Xenco

Chain of Custody

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

Work Order No: _____

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Garrett Green
Company Name:	Ensolum	Company Name:	XTO Energy
Address:	3122 National Parks Hwy	Address:	3104 E. Green St.
City, State ZIP:	Carlsbad, NM 88220	City, State ZIP:	Carlsbad, NM 88220
Phone:	303-887-2946	Email:	Garrett.Green@ExxonMobil.com

Work Order Comments

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

Project Name:	PLU BS 15H	Turn Around	☐ Routine ☒ Rush
Project Number:	03C1558224	Due Date:	24h
Project Location:		TAT starts the day received by the lab, if received by 4:30pm	
Sampler's Name:	Connor Whitman		
PO #:			

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Samples Received Intact:	(Yes) No	Thermometer ID:	IR#007
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Temperature Reading:	5.2
Total Containers:		Corrected Temperature:	5.0

Preservative Codes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Grab/ Comp	# of Cont	Pres. Code	CHLORIDES (EPA: 3000.0)	TPH (8015)	BTEX (8021)
SW06B	S	6/15/23	1:45	0-8'	C	1		/	/	/
SW07B	S	6/15/23	2:05	0-8'	C	1		/	/	/

Parameters

890-4828 Chain of Custody

Sample Comments

Incident ID:
NAB1821157574

Cost Center:
1140041001

AFE:

CW

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		6.15.23 1540	4		
3			6		
5					

Revised Date: 08/25/2020 Rev. 2020.2

Login Sample Receipt Checklist

Client: Ensolum

Job Number: 890-4828-1
SDG Number: 03C1558224

Login Number: 4828
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: 890-4828-1
SDG Number: 03C1558224

Login Number: 4828
List Number: 2
Creator: Teel, Brianna

List Source: Eurofins Midland
List Creation: 06/19/23 08:39 AM

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

ENSOLUM

APPENDIX E

NMOCD Notifications

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

[**EXTERNAL EMAIL**]

All,

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

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

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

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

Thursday
- Nash Deep East / nAPP2308136642

Friday
- Nash Deep East / nAPP2308136642

Thank you,

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

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
XTO Energy, Inc
PLU CVX JV BS 015H
Incident Number NAB1821157574

Photograph 1 Date: 9/9/2019
Description: Excavation north side of Twin Wells Road.
View: East

Photograph 2 Date: 5/30/2023
Description: View of historical excavation area.
View: Northeast

Photograph 3 Date: 5/30/2023
Description: View of historical excavation area.
View: West

Photograph 4 Date: 5/30/2023
Description: View of area around pothole PH05.
View: Northeast

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

General Information
Phone: (505) 629-6116

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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 436363

QUESTIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 436363
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAB1821157574**
Incident Name	**NAB1821157574 PLU CVX JV BS 015H @ 30-015-40395**
Incident Type	**Oil Release**
Incident Status	**Remediation Closure Report Received**
Incident Well	**[30-015-40395] POKER LAKE CVX JV BS #015H**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	PLU CVX JV BS 015H
Date Release Discovered	07/12/2018
Surface Owner	Federal

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

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Crude Oil | Released: 2 BBL | Recovered: 0 BBL | Lost: 2 BBL.
Produced Water Released (bbls) Details	Cause: Corrosion | Flow Line - Production | Produced Water | Released: 8 BBL | Recovered: 2 BBL | Lost: 6 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: 436363
	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: 02/27/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 436363
	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	NM OSE iWaters Database Search
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 1000 (ft.) and ½ (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 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Between 1 and 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 300 and 500 (ft.)
Did the release impact areas not on an exploration, development, production, or storage site	Yes

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	2450
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	4050
GRO+DRO (EPA SW-846 Method 8015M)	4050
BTEX (EPA SW-846 Method 8021B or 8260B)	25.5
Benzene (EPA SW-846 Method 8021B or 8260B)	0.3
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	09/09/2019
On what date will (or did) the final sampling or liner inspection occur	06/15/2023
On what date will (or was) the remediation complete(d)	06/15/2023
What is the estimated surface area (in square feet) that will be reclaimed	820
What is the estimated volume (in cubic yards) that will be reclaimed	365
What is the estimated surface area (in square feet) that will be remediated	820
What is the estimated volume (in cubic yards) that will be remediated	365
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 436363
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	HALFWAY DISPOSAL AND LANDFILL [fEEM0112334510]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/27/2025
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

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QUESTIONS (continued)

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 436363
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Deferral Requests Only *Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.*	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 436363
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	**436490**
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	**06/05/2023**
What was the (estimated) number of samples that were to be gathered	**5**
What was the sampling surface area in square feet	**1000**

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	Yes
Have the lateral and vertical extents of contamination been fully delineated	**Yes**
Was this release entirely contained within a lined containment area	**No**
All areas reasonably needed for production or subsequent drilling operations have been stabilized, returned to the sites existing grade, and have a soil cover that prevents ponding of water, minimizing dust and erosion	Yes
What was the total surface area (in square feet) remediated	820
What was the total volume (cubic yards) remediated	365
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	820
What was the total volume (in cubic yards) reclaimed	365
Summarize any additional remediation activities not included by answers (above)	Excavation, delineation, and soil sampling activities were completed at the Site to address the impacted soil resulting from the July 12, 2018, crude oil and produced water release. Based on the additional soil sampling activities completed during June 2023 and laboratory analytical results for all final excavation and delineation soil samples compliant with the Closure Criteria and the reclamation requirement in soil samples collected from the top four feet, no further remediation is required. Additionally, it should be noted that the heavily trafficked Twin Wells Road was paved with asphalt between 2019 and 2023.

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

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

I hereby agree and sign off to the above statement	Name: Colton Brown Title: Environmental Advisor Email: colton.s.brown@exxonmobil.com Date: 02/27/2025

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QUESTIONS (continued)

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 436363
	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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1220 S. St Francis Dr.
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CONDITIONS

Operator:	OGRID:
XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	5380
	Action Number: 436363
	Action Type: [C-141] Remediation Closure Request C-141 (C-141-v-Closure)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Remediation closure plan approved	3/11/2025
jburdine	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.	3/11/2025
jburdine	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.	3/11/2025
jburdine	A revegetation report will not be accepted until revegetation 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.	3/11/2025
jburdine	All revegetation activities will need to be documented and included in the revegetation report. The revegetation report will need to include: An executive summary of the revegetation activities including: Seed mix, Method of seeding, dates of when the release area was reseeded, information pertinent to inspections, information about any amendments added to the soil, information on how the vegetative cover established meets the life-form ratio of plus or minus fifty percent of pre-disturbance levels and a total percent plant cover of at least seventy percent of pre-disturbance levels, excluding noxious weeds per 19.15.29.13 D.(3) NMAC, and any additional information; a scaled Site Map including area that was revegetated in square feet; and pictures of the revegetated areas during reseeding activities, inspections, and final pictures when revegetation is achieved.	3/11/2025