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	NAB1926638462
District RP	2RP-5620
Facility ID	fAB1926638136
Application ID	pAB1926638229

Release Notification UTL32-190827-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1926638462
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.197505° Longitude -103.827318°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 330H flow line	Site Type Production Well Facility flow line
Date Release Discovered 8/13/2019	API# *(if applicable)* ~~30-015-39253~~ AB N/A

Unit Letter	Section	Township	Range	County
P	24	24S	30E	Eddy

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

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) 0.74	Volume Recovered (bbls) 0.5
☒ Produced Water	Volume Released (bbls) 6.66	Volume Recovered (bbls) 4.5
	Is the concentration of total dissolved solids (TDS) 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

A buried section of the flow line at a road crossing developed a hole due to corrosion. Fluids were released to the lease road and pasture adjacent to the road. The well was temporarily shut in and the line was exposed and clamped. Free fluids were recovered. Additional third party resources have been retained to assist with remediation.

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State of New Mexico
Oil Conservation Division

Incident ID	NAB1926638462
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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? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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: Kyle Littrell
Date: 8/27/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 9/23/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5620
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-5620
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Coordinator_____

Signature:_____ _____ Date: _12/11/2019_____

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5620
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Application ID	

Closure

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

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

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

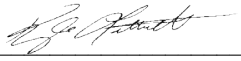
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 12/11/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

December 11, 2019

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

RE: Closure Request
Poker Lake Unit 330H Flow Line
Remediation Permit Number 2RP-5620
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment and soil sampling activities at the Poker Lake Unit 330H Flow Line (Site) located in Unit P, Section 24, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling activities was to address impacts to soil following the release of produced water and crude oil onto the lease road and adjacent pasture area. Based on remediation activities completed to-date and results of the final soil confirmation sampling event, XTO is requesting no further action for this release event.

BACKGROUND

On August 13, 2019, a leak was discovered in a buried section of flow line at a road crossing that had developed from a hole due to corrosion resulting in the release of crude oil and produced water on to the lease road and pasture adjacent to the road. The well was temporarily shut-in while the line was repaired. The release was estimated to be comprised of approximately 0.74 barrels (bbls) of crude oil and 6.66 bbls of produced water. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 0.5 bbls of crude oil and 4.5 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on August 27, 2019, and was subsequently assigned Remediation Permit (RP) Number 2RP-5620 (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 New Mexico Administrative Code (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 C 02110, located approximately 8,194 feet west of the Site. The water well has a depth to groundwater of 400 feet bgs and a total depth of 600 feet bgs. Ground surface elevation at the water well location is 3,412 feet above mean sea level (AMSL), which is approximately 144 feet higher in elevation than the Site. The closest continuously flowing water or significant

watercourse to the Site is a freshwater emergent wetland located approximately 5,810 feet northwest 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;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg; and
- Chloride: 20,000 mg/kg.

SITE ASSESSMENT, DELINEATION SOIL SAMPLING, AND EXCAVATION ACTIVITIES

On August 15, 2019, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed along the lease road and east of the point of release into the adjacent pasture. LTE personnel collected a preliminary soil sample (SS01) within the release extent near the edge of the lease road from a depth of approximately 0.5 feet bgs to assess potential impacts to soil. The release extent and preliminary soil sample location were mapped utilizing a handheld Global Positing System (GPS) unit and are depicted on Figure 2.

Soil from the preliminary soil sample was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The soil sample was placed directly into a pre-cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was delivered at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following EPA Method 300.0.

Based on laboratory analytical results for preliminary soil sample SS01 further delineation sampling to determine the presence or absence of soil impacts appeared to be warranted. On November 5, 2019, LTE personnel advanced boreholes via hand-auger at two locations (BH01 and BH02) within the release extent. Two soil samples were collected within each borehole at

depths of approximately 0.5 feet (BH01 and BH02) and 2 feet bgs (BH01A and BH02A). Soil staining was not observed during the Site visit. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride. Field screening results and observations for each borehole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil samples were collected, handled and analyzed as described above. All boreholes were backfilled with the soil removed from the boreholes. The delineation soil sample locations are depicted on Figure 3.

Based on the laboratory analytical results from the borehole samples, additional remediation activities appeared to be warranted on the lease road but were not necessary within the pasture to the east. On December 2, 2019, the road was scraped with a blade to address the elevated TPH-GRO and TPH-DRO and TPH concentrations in and around borehole BH01 at approximately 0.5 feet bgs. An area approximately 800 square feet in size and to a depth of approximately 0.5 feet bgs was scraped along the lease road to address residual TPH impacts in soil.

LTE conducted confirmation sampling on December 3, 2019, to confirm the remaining soil in the vicinity of borehole BH01 at approximately 0.5 feet bgs had been fully remediated. LTE collected four 5-point composite confirmation floor samples (FS01 through FS04) from the base of the excavation to a depth of approximately 0.5 feet bgs within the affected area of the lease road (Figure 4 and Table 1).

The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, re- sealable plastic bag and homogenizing the samples by thoroughly mixing. Samples were then placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were collected, handled, and analyzed as described above. Photographic documentation was conducted following excavation activities. Photographs are included in Attachment 3.

SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated preliminary soil sample SS01 and confirmation floor samples FS01 through FS04 were compliant with the Closure Criteria Closure Criteria for benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride. TPH-GRO and TPH-DRO and TPH concentrations in soil exceeded Closure Criteria in borehole BH01 at approximately 0.5 feet bgs prior to excavation. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Delineation soil sampling activities were conducted within the release extent on the lease road and in the adjacent pasture. Laboratory analytical results for the November 2019 delineation soil samples in BH01A and BH02/BH02A indicated benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride concentrations were limited in extent to the top 0.5 feet of the lease road, warranting

the lease road to be scraped and sampled for verification of compliance with the Closure Criteria. Laboratory analytical results for four confirmation soil samples, collected from the lease road after blading activities, indicated benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Initial response efforts and remedial activities have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5620. An updated 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 or aager@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Tacoma Morrissey
Staff Geologist

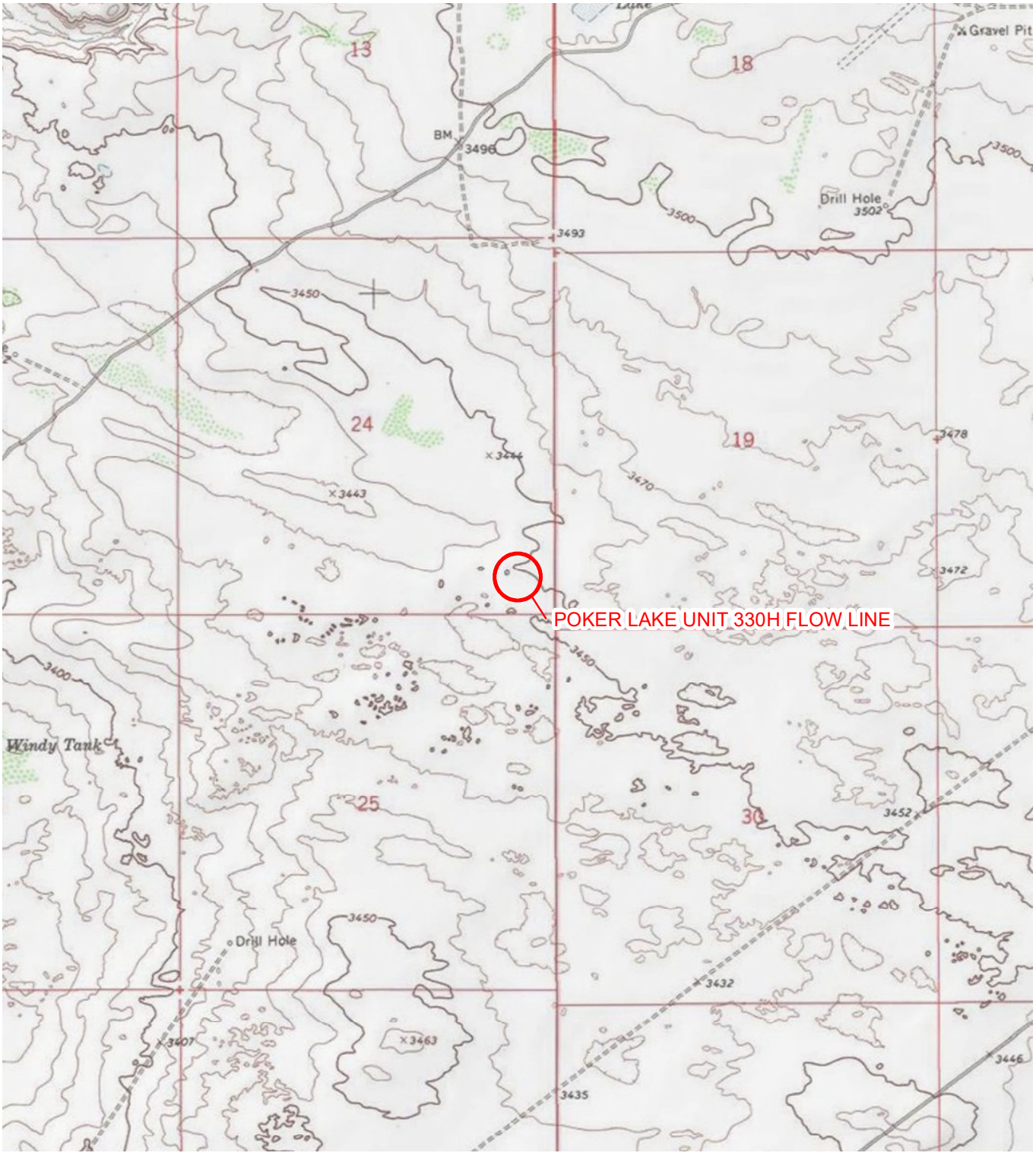
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Victoria Venegas, NMOCD
Robert Hamlet, NMOCD
Jim Amos, United States Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Confirmation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5620)
Attachment 2	Lithologic/Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

IMAGE COURTESY OF ESRI/USGS

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5620

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 330H FLOW LINE
UNIT P SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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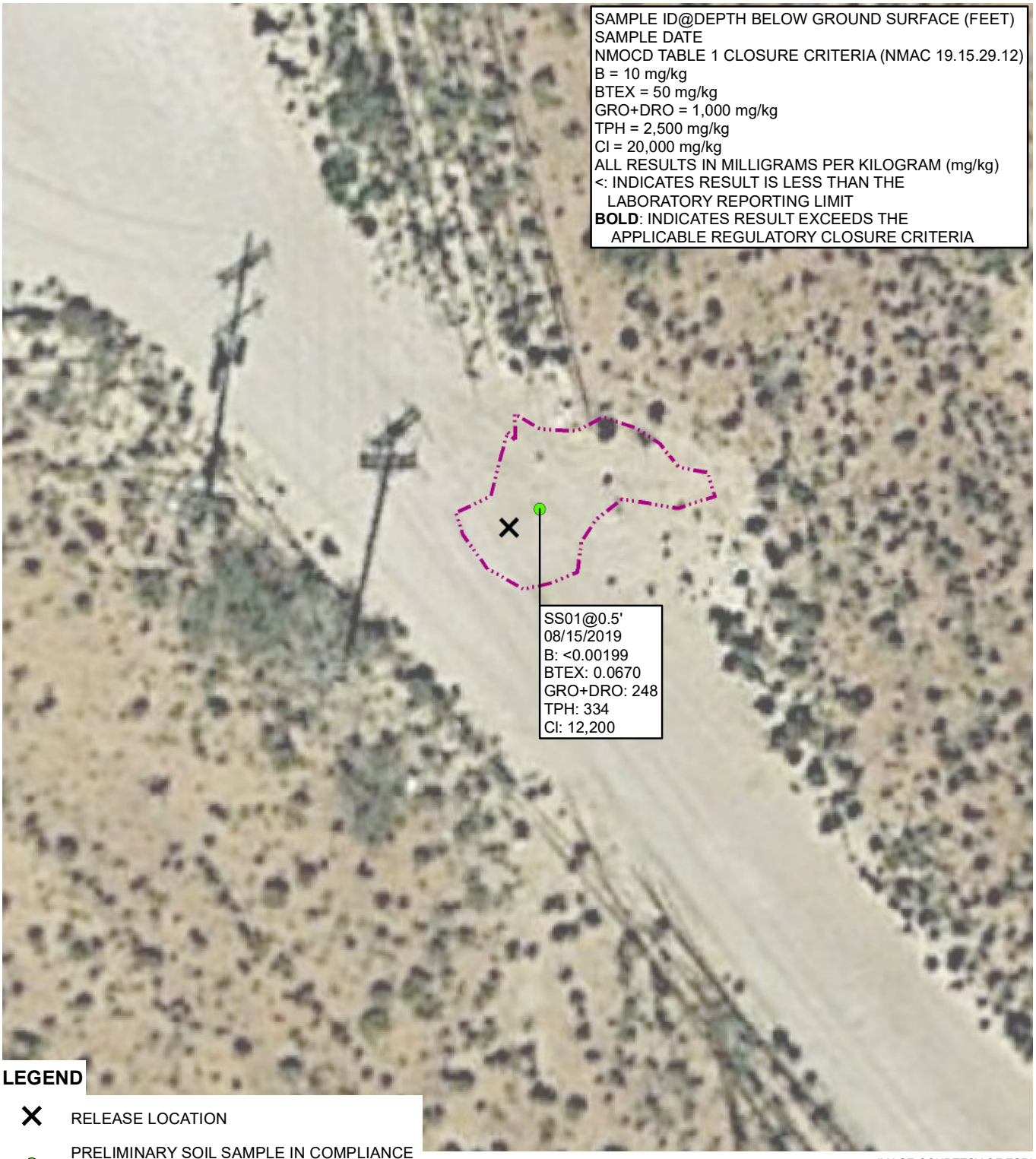


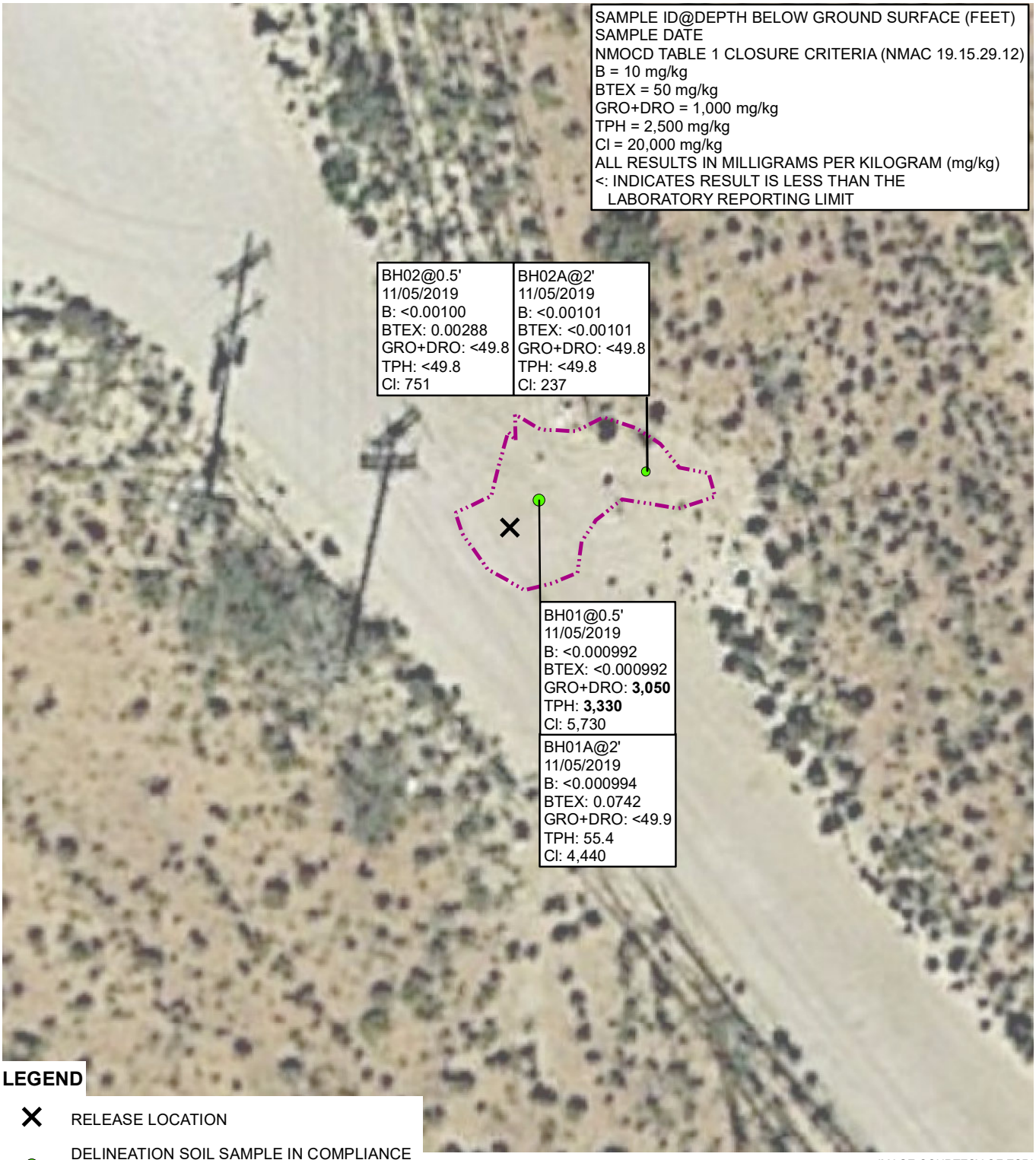
LEGEND

- RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- RELEASE EXTENT

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-5620

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 330H FLOW LINE
UNIT P SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919191_PLU 330H FLOWLINE\012919191_FIG02_PRELIMINARY_5620.mxd



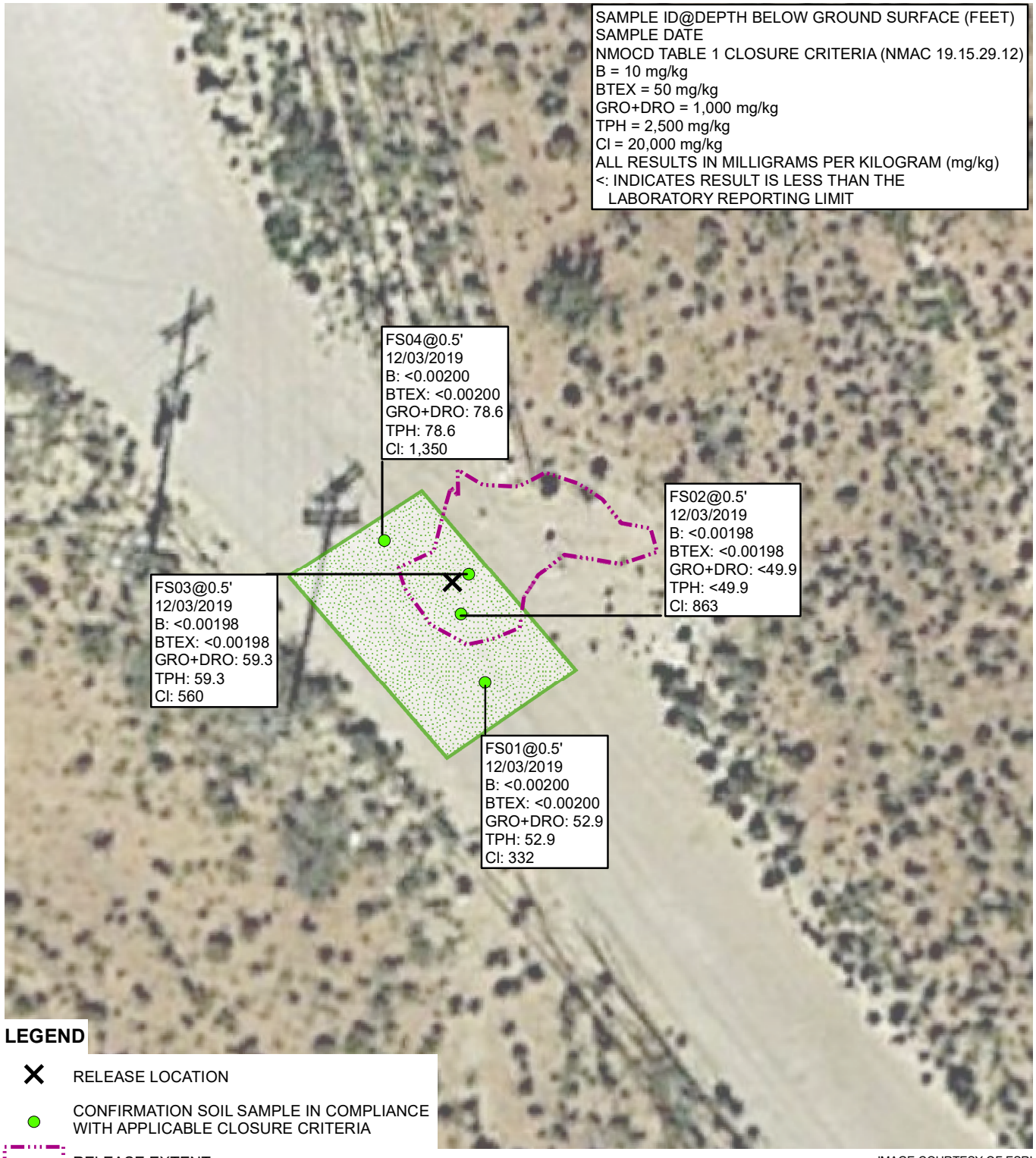
LEGEND

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

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-5620

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 330H FLOW LINE
UNIT P SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919191_PLU 330H FLOWLINE\012919191_FIG03_DELINEATION_5620.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-5620

FIGURE 4
CONFIRMATION SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 330H FLOW LINE
UNIT P SEC 24 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919191_PLU 330H FLOWLINE\012919191_FIG04_CONFIRMATION_5620.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 330H FLOW LINE
REMEDIATION PERMIT NUMBER 2RP-5620
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)	MRO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	08/15/2019	<0.00199	0.0130	0.0119	0.0421	0.0670	<24.9	248	85.7	248	334	12,200
BH01	0.5	11/05/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<49.8	3050	283	**3,050**	**3,330**	5,730
BH01A	2	11/05/2019	<0.000994	0.0156	0.00893	0.0497	0.0742	<49.9	<49.9	55.4	<49.9	55.4	4,440
BH02	0.5	11/05/2019	<0.00100	<0.00100	<0.00100	0.00288	0.00288	<49.8	<49.8	<49.8	<49.8	<49.8	751
BH02A	2	11/05/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	237
FS01	0.5	12/03/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	52.9	<50.1	52.9	52.9	332
FS02	0.5	12/03/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	863
FS03	0.5	12/03/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	59.3	<50.3	59.3	59.3	560
FS04	0.5	12/03/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	78.6	<50.3	78.6	78.6	1,350

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

MRO - 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-5620)

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	NAB1926638462
District RP	2RP-5620
Facility ID	fAB1926638136
Application ID	pAB1926638229

Release Notification UTL32-190827-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1926638462
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.197505° Longitude -103.827318°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit 330H flow line	Site Type Production Well Facility flow line
Date Release Discovered 8/13/2019	API# *(if applicable)* ~~30-015-39253~~ AB N/A

Unit Letter	Section	Township	Range	County
P	24	24S	30E	Eddy

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

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) 0.74	Volume Recovered (bbls) 0.5
☒ Produced Water	Volume Released (bbls) 6.66	Volume Recovered (bbls) 4.5
	Is the concentration of total dissolved solids (TDS) 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

A buried section of the flow line at a road crossing developed a hole due to corrosion. Fluids were released to the lease road and pasture adjacent to the road. The well was temporarily shut in and the line was exposed and clamped. Free fluids were recovered. Additional third party resources have been retained to assist with remediation.

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Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1926638462
District RP	2RP-5620
Facility ID	fAB1926638136
Application ID	pAB1926638229

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? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

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: Kyle Littrell
Date: 8/27/2019
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: Amalia Bustamante
Date: 9/23/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5620
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-5620
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Coordinator_____

Signature:_____ _____ Date: _12/11/2019_____

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

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5620
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 12/11/2019

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: LITHOLOGIC / SOIL SMAPLING LOGS

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

Identifier:	Date:
BH01	11/5/2019
PLU 330H Flowline	2RP-5620

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: KJH	Method: Hand Auger
Lat/Long:	Field Screening: Chloride, TPH
Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	4,977.6	189.6	n	BH01	0	0.5	SM	SILTY SAND, dry, brown, poorly graded, no stain, strong odor
dry	3,902.4	6.6	n	BH01A	2	2	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH02	11/5/2019
PLU 330H Flowline	2RP-5620

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: KJH	Method: Hand Auger
Lat/Long:	Field Screening: Chloride, TPH
Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	1,233.6	3.2	n	BH02	0	0.5	SM	SILTY SAND, dry, brown, poorly graded, no stain, no odor
moist	436.8	1.5	n	BH02A	2	2	SM	SILTY SAND, moist, brown, poorly graded, no stain, no odor
								Total Depth 2 feet bgs

ATTACHMENT 3: PHOTOGRAPHIC LOG

Northern view of release area after excavation activities.

Project: 012919191	XTO Energy, Inc. Poker Lake Unit 330H Flow Line	LTE Advancing Opportunity
December 11, 2019	Photographic Log	

Eastern view of release area after excavation activities.

Project: 012919191	XTO Energy, Inc. Poker Lake Unit 330H Flow Line	LTE Advancing Opportunity
December 11, 2019	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 634323

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 330H Flowline

21-AUG-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)

21-AUG-19

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

Reference: XENCO Report No(s): **634323**
PLU 330H Flowline
Project Address:

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) 634323. 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. 634323 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

Sample Cross Reference 634323

LT Environmental, Inc., Arvada, CO

PLU 330H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08-15-19 15:20	.5 ft	634323-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 330H Flowline

Project ID:
Work Order Number(s): *634323*

Report Date: *21-AUG-19*
Date Received: *08/16/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099172 BTEX by EPA 8021B
Lab Sample ID 634323-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634323-001.
The Laboratory Control Sample for m,p-Xylenes is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 634323

LT Environmental, Inc., Arvada, CO

Project Name: PLU 330H Flowline

Project Id:
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Aug-16-19 10:50 am
Report Date: 21-AUG-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	634323-001					
	Field Id:	SS01					
	Depth:	.5- ft					
	Matrix:	SOIL					
	Sampled:	Aug-15-19 15:20					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-17-19 11:00					
	Analyzed:	Aug-19-19 19:55					
	Units/RL:	mg/kg	RL				
Benzene		<0.00199	0.00199				
Toluene		0.0130	0.00199				
Ethylbenzene		0.0119	0.00199				
m,p-Xylenes		0.0180	0.00398				
o-Xylene		0.0241	0.00199				
Total Xylenes		0.0421	0.00199				
Total BTEX		0.0670	0.00199				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-19-19 11:50					
	Analyzed:	Aug-20-19 13:14					
	Units/RL:	mg/kg	RL				
Chloride		12200	100				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-19-19 10:00					
	Analyzed:	Aug-20-19 10:00					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9				
Diesel Range Organics (DRO)		248	24.9				
Motor Oil Range Hydrocarbons (MRO)		85.7	24.9				
Total TPH		334	24.9				
Total GRO-DRO		248	24.9				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 634323

LT Environmental, Inc., Arvada, CO

PLU 330H Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.16.19 10.50
Lab Sample Id:	634323-001	Date Collected:	08.15.19 15.20	Sample Depth:	.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.19.19 11.50	Basis:	Wet Weight
Seq Number:	3099041			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12200**	100	mg/kg	08.20.19 13.14		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.19.19 10.00	Basis:	Wet Weight
Seq Number:	3099053			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	08.20.19 10.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**248**	24.9	mg/kg	08.20.19 10.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**85.7**	24.9	mg/kg	08.20.19 10.00		1
Total TPH	PHC635	**334**	24.9	mg/kg	08.20.19 10.00		1
Total GRO-DRO	PHC628	**248**	24.9	mg/kg	08.20.19 10.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	08.20.19 10.00	
o-Terphenyl	84-15-1	93	%	70-135	08.20.19 10.00	

Certificate of Analytical Results 634323

LT Environmental, Inc., Arvada, CO

PLU 330H Flowline

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.16.19 10.50
Lab Sample Id:	634323-001	Date Collected:	08.15.19 15.20	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.17.19 11.00	Basis:	Wet Weight
Seq Number:	3099172			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.19.19 19.55	U	1
Toluene	108-88-3	**0.0130**	0.00199	mg/kg	08.19.19 19.55		1
Ethylbenzene	100-41-4	**0.0119**	0.00199	mg/kg	08.19.19 19.55		1
m,p-Xylenes	179601-23-1	**0.0180**	0.00398	mg/kg	08.19.19 19.55		1
o-Xylene	95-47-6	**0.0241**	0.00199	mg/kg	08.19.19 19.55		1
Total Xylenes	1330-20-7	**0.0421**	0.00199	mg/kg	08.19.19 19.55		1
Total BTEX		**0.0670**	0.00199	mg/kg	08.19.19 19.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	08.19.19 19.55	
1,4-Difluorobenzene	540-36-3	76	%	70-130	08.19.19 19.55	

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 634323

LT Environmental, Inc.

PLU 330H Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Solid — Date Prep: 08.19.19
MB Sample Id: 7684479-1-BLK — LCS Sample Id: 7684479-1-BKS — LCSD Sample Id: 7684479-1-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	241	96	239	96	90-110	1	20	mg/kg	08.19.19 15:04	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Soil — Date Prep: 08.19.19
Parent Sample Id: 634286-003 — MS Sample Id: 634286-003 S — MSD Sample Id: 634286-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.4	249	282	107	283	107	90-110	0	20	mg/kg	08.20.19 11:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099041 — Matrix: Soil — Date Prep: 08.19.19
Parent Sample Id: 634401-012 — MS Sample Id: 634401-012 S — MSD Sample Id: 634401-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	93.2	250	349	102	348	102	90-110	0	20	mg/kg	08.19.19 15:23	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3099053 — Matrix: Solid — Date Prep: 08.19.19
MB Sample Id: 7684478-1-BLK — LCS Sample Id: 7684478-1-BKS — LCSD Sample Id: 7684478-1-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	831	83	824	82	70-135	1	20	mg/kg	08.19.19 14:05	
Diesel Range Organics (DRO)	<25.0	1000	863	86	868	87	70-135	1	20	mg/kg	08.19.19 14:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		82		80		70-135	%	08.19.19 14:05
o-Terphenyl	86		83		87		70-135	%	08.19.19 14:05

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

QC Summary 634323

LT Environmental, Inc.

PLU 330H Flowline

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3099053 | Matrix: Soil | Date Prep: 08.19.19
Parent Sample Id: 634403-001 | MS Sample Id: 634403-001 S | MSD Sample Id: 634403-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	820	82	818	82	70-135	0	20	mg/kg	08.19.19 15:10	
Diesel Range Organics (DRO)	<24.9	997	862	86	835	84	70-135	3	20	mg/kg	08.19.19 15:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		86		70-135	%	08.19.19 15:10
o-Terphenyl	94		73		70-135	%	08.19.19 15:10

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3099172 | Matrix: Solid | Date Prep: 08.17.19
MB Sample Id: 7684440-1-BLK | LCS Sample Id: 7684440-1-BKS | LCSD Sample Id: 7684440-1-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	0.0933	93	0.0952	95	70-130	2	35	mg/kg	08.19.19 16:27	
Toluene	<0.000456	0.100	0.0921	92	0.0945	95	70-130	3	35	mg/kg	08.19.19 16:27	
Ethylbenzene	<0.000565	0.100	0.0889	89	0.0909	91	70-130	2	35	mg/kg	08.19.19 16:27	
m,p-Xylenes	<0.00101	0.200	0.173	87	0.177	89	70-130	2	35	mg/kg	08.19.19 16:27	
o-Xylene	<0.000344	0.100	0.0891	89	0.0923	92	70-130	4	35	mg/kg	08.19.19 16:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		105		70-130	%	08.19.19 16:27
4-Bromofluorobenzene	95		91		94		70-130	%	08.19.19 16:27

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3099172 | Matrix: Soil | Date Prep: 08.17.19
Parent Sample Id: 634323-001 | MS Sample Id: 634323-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	0.000885	0.0996	0.0767	76	70-130	mg/kg	08.19.19 17:08	
Toluene	0.0130	0.0996	0.0928	80	70-130	mg/kg	08.19.19 17:08	
Ethylbenzene	0.0119	0.0996	0.0845	73	70-130	mg/kg	08.19.19 17:08	
m,p-Xylenes	0.0180	0.199	0.152	67	70-130	mg/kg	08.19.19 17:08	X
o-Xylene	0.0241	0.0996	0.0994	76	70-130	mg/kg	08.19.19 17:08	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		70-130	%	08.19.19 17:08
4-Bromofluorobenzene	118		70-130	%	08.19.19 17:08

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

XENCO LABORATORIES

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
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 634323

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrel
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO-Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	432.704.5178	Email:	dmoir@ltenv.com rmcafee@ltenv.com

Work Order Comments

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

Project Name:	PLU 330H Flowline	**Turn Around**	
Project Number:		Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	4.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	08/15/19	1520	0.5'	1	X	X	X	discrete

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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 [signature]	[signature]	8/16/19 1050	2 [signature]	[signature]	8/16/19 11:05
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **46446**

Date/Time: 08/16/19 13:08
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7760 0892 0480

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
634323-001	S	SS01	08/15/19 15:20	SW8015MOD_NM	TPH by SW8015 Mod	08/22/19	08/29/19	JKR	GRO-DRO PHCC10C28 PI	
634323-001	S	SS01	08/15/19 15:20	SW8021B	BTEX by EPA 8021B	08/22/19	08/29/19	JKR	BR4FBZ BZ BZME EBZ X	
634323-001	S	SS01	08/15/19 15:20	E300_CL	Chloride by EPA 300	08/22/19	02/11/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/16/2019

Received By: Katie Lowe

Date Received: 08/17/2019 12:15

Cooler Temperature: 3.8

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46446

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

Sent By: Elizabeth McClellan **Date Sent:** 08/16/2019 01:08 PM

Received By: Katie Lowe **Date Received:** 08/17/2019 12:15 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#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: Katie Lowe Date: 08/17/2019

Katie Lowe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/16/2019 10:50:00 AM

Work Order #: 634323

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?	**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: 08/16/2019

Checklist reviewed by: Jessica Kramer Date: 08/20/2019

Analytical Report 642186

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 330 Flowline

012919191

07-NOV-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 (2019-058), North Carolina (681), Arkansas (19-037-0)

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-Carlsbad (LELAP): Louisiana (05092)
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)

07-NOV-19

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

Reference: XENCO Report No(s): **642186**
PLU 330 Flowline
Project Address:

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) 642186. 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. 642186 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

Sample Cross Reference 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	11-05-19 14:22	0.5 ft	642186-001
BH01A	S	11-05-19 14:28	2 ft	642186-002
BH02	S	11-05-19 14:33	0.5 ft	642186-003
BH02A	S	11-05-19 14:37	2 ft	642186-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 330 Flowline

Project ID: *012919191*
Work Order Number(s): *642186*

Report Date: *07-NOV-19*
Date Received: *11/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106690 BTEX by EPA 8021B

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

Certificate of Analysis Summary 642186

LT Environmental, Inc., Arvada, CO

Project Name: PLU 330 Flowline

Project Id: 012919191
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Nov-06-19 08:10 am
Report Date: 07-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642186-001		642186-002		642186-003		642186-004					
	Field Id:	BH01		BH01A		BH02		BH02A					
	Depth:	0.5- ft		2- ft		0.5- ft		2- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Nov-05-19 14:22		Nov-05-19 14:28		Nov-05-19 14:33		Nov-05-19 14:37					
BTEX by EPA 8021B	***Extracted:***	Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11		Nov-06-19 09:11					
	Analyzed:	Nov-06-19 15:36		Nov-06-19 15:55		Nov-06-19 16:14		Nov-06-19 16:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.000992	0.000992	<0.000994	0.000994	<0.00100	0.00100	<0.00101	0.00101				
Toluene		<0.000992	0.000992	0.0156	0.000994	<0.00100	0.00100	<0.00101	0.00101				
Ethylbenzene		<0.000992	0.000992	0.00893	0.000994	<0.00100	0.00100	<0.00101	0.00101				
m,p-Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201				
o-Xylene		<0.000992	0.000992	0.0497	0.000994	0.00288	0.00100	<0.00101	0.00101				
Total Xylenes		<0.000992	0.000992	0.0497	0.000994	0.00288	0.00100	<0.00101	0.00101				
Total BTEX		<0.000992	0.000992	0.0742	0.000994	0.00288	0.00100	<0.00101	0.00101				
Chloride by EPA 300	***Extracted:***	Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00		Nov-06-19 10:00					
	Analyzed:	Nov-06-19 12:32		Nov-06-19 12:38		Nov-06-19 12:44		Nov-06-19 12:50					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		5730	198	4440	198	751	49.5	237	9.98				
TPH by SW8015 Mod	***Extracted:***	Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00		Nov-06-19 12:00					
	Analyzed:	Nov-06-19 15:09		Nov-06-19 15:29		Nov-06-19 15:49		Nov-06-19 16:09					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<49.8	49.8	<49.8	49.8				
Diesel Range Organics (DRO)		3050	49.8	<49.9	49.9	<49.8	49.8	<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		283	49.8	55.4	49.9	<49.8	49.8	<49.8	49.8				
Total GRO-DRO		3050	49.8	<49.9	49.9	<49.8	49.8	<49.8	49.8				
Total TPH		3330	49.8	55.4	49.9	<49.8	49.8	<49.8	49.8				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-001	Date Collected:	11.05.19 14.22	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5730**	198	mg/kg	11.06.19 12.32		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 15.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**3050**	49.8	mg/kg	11.06.19 15.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**283**	49.8	mg/kg	11.06.19 15.09		1
Total GRO-DRO	PHC628	**3050**	49.8	mg/kg	11.06.19 15.09		1
Total TPH	PHC635	**3330**	49.8	mg/kg	11.06.19 15.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	11.06.19 15.09	
o-Terphenyl	84-15-1	102	%	70-135	11.06.19 15.09	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-001	Date Collected:	11.05.19 14.22	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.06.19 15.36	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1
Total BTEX		<0.000992	0.000992	mg/kg	11.06.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.06.19 15.36	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.06.19 15.36	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-002	Date Collected:	11.05.19 14.28	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4440**	198	mg/kg	11.06.19 12.38		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.06.19 15.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.06.19 15.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**55.4**	49.9	mg/kg	11.06.19 15.29		1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.06.19 15.29	U	1
Total TPH	PHC635	**55.4**	49.9	mg/kg	11.06.19 15.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	11.06.19 15.29	
o-Terphenyl	84-15-1	110	%	70-135	11.06.19 15.29	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-002	Date Collected:	11.05.19 14.28	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	11.06.19 15.55	U	1
Toluene	108-88-3	**0.0156**	0.000994	mg/kg	11.06.19 15.55		1
Ethylbenzene	100-41-4	**0.00893**	0.000994	mg/kg	11.06.19 15.55		1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.06.19 15.55	U	1
o-Xylene	95-47-6	**0.0497**	0.000994	mg/kg	11.06.19 15.55		1
Total Xylenes	1330-20-7	**0.0497**	0.000994	mg/kg	11.06.19 15.55		1
Total BTEX		**0.0742**	0.000994	mg/kg	11.06.19 15.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.06.19 15.55	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.06.19 15.55	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-003	Date Collected:	11.05.19 14.33	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**751**	49.5	mg/kg	11.06.19 12.44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 15.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 15.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 15.49	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 15.49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 15.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	11.06.19 15.49	
o-Terphenyl	84-15-1	104	%	70-135	11.06.19 15.49	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-003	Date Collected:	11.05.19 14.33	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.06.19 16.14	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.06.19 16.14	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.06.19 16.14	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.06.19 16.14	U	1
o-Xylene	95-47-6	**0.00288**	0.00100	mg/kg	11.06.19 16.14		1
Total Xylenes	1330-20-7	**0.00288**	0.00100	mg/kg	11.06.19 16.14		1
Total BTEX		**0.00288**	0.00100	mg/kg	11.06.19 16.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.06.19 16.14	
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.06.19 16.14	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-004	Date Collected:	11.05.19 14.37	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 10.00	Basis:	Wet Weight
Seq Number:	3106646				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**237**	9.98	mg/kg	11.06.19 12.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.06.19 12.00	Basis:	Wet Weight
Seq Number:	3106685				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	11.06.19 16.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	11.06.19 16.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	11.06.19 16.09	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	11.06.19 16.09	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	11.06.19 16.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	11.06.19 16.09	
o-Terphenyl	84-15-1	114	%	70-135	11.06.19 16.09	

Certificate of Analytical Results 642186

LT Environmental, Inc., Arvada, CO

PLU 330 Flowline

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	11.06.19 08.10
Lab Sample Id:	642186-004	Date Collected:	11.05.19 14.37	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.06.19 09.11	Basis:	Wet Weight
Seq Number:	3106690				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.06.19 16.33	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.06.19 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.06.19 16.33	
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.06.19 16.33	

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 642186

LT Environmental, Inc.

PLU 330 Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106646 — Matrix: Solid — Date Prep: 11.06.19
MB Sample Id: 7689722-1-BLK — LCS Sample Id: 7689722-1-BKS — LCSD Sample Id: 7689722-1-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	239	96	234	94	90-110	2	20	mg/kg	11.06.19 10:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106646 — Matrix: Soil — Date Prep: 11.06.19
Parent Sample Id: 642182-001 — MS Sample Id: 642182-001 S — MSD Sample Id: 642182-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.8	199	230	107	232	108	90-110	1	20	mg/kg	11.06.19 11:09	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3106685 — Matrix: Solid — Date Prep: 11.06.19
MB Sample Id: 7689771-1-BLK — LCS Sample Id: 7689771-1-BKS — LCSD Sample Id: 7689771-1-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	936	94	924	92	70-135	1	35	mg/kg	11.06.19 11:18	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	999	100	70-135	5	35	mg/kg	11.06.19 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		121		134		70-135	%	11.06.19 11:18
o-Terphenyl	116		120		121		70-135	%	11.06.19 11:18

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3106685 — Matrix: Solid — Date Prep: 11.06.19
MB Sample Id: 7689771-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.06.19 10:58	

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 642186

LT Environmental, Inc.

PLU 330 Flowline

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3106685 | Matrix: Soil | Date Prep: 11.06.19
Parent Sample Id: 642182-001 | MS Sample Id: 642182-001 S | MSD Sample Id: 642182-001 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)	<50.0	1000	922	92	911	91	70-135	1	35	mg/kg	11.06.19 12:17	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.06.19 12:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		117		70-135	%	11.06.19 12:17
o-Terphenyl	119		115		70-135	%	11.06.19 12:17

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3106690 | Matrix: Solid | Date Prep: 11.06.19
MB Sample Id: 7689767-1-BLK | LCS Sample Id: 7689767-1-BKS | LCSD Sample Id: 7689767-1-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	0.0931	93	0.0911	91	70-130	2	35	mg/kg	11.06.19 11:12	
Toluene	<0.00100	0.100	0.0943	94	0.0930	93	70-130	1	35	mg/kg	11.06.19 11:12	
Ethylbenzene	<0.00100	0.100	0.0950	95	0.0943	94	71-129	1	35	mg/kg	11.06.19 11:12	
m,p-Xylenes	<0.00200	0.200	0.203	102	0.201	101	70-135	1	35	mg/kg	11.06.19 11:12	
o-Xylene	<0.00100	0.100	0.100	100	0.0980	98	71-133	2	35	mg/kg	11.06.19 11:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		96		70-130	%	11.06.19 11:12
4-Bromofluorobenzene	104		105		100		70-130	%	11.06.19 11:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3106690 | Matrix: Soil | Date Prep: 11.06.19
Parent Sample Id: 642182-001 | MS Sample Id: 642182-001 S | MSD Sample Id: 642182-001 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	0.0640	63	0.0717	71	70-130	11	35	mg/kg	11.06.19 11:50	X
Toluene	<0.00101	0.101	0.0805	80	0.0729	72	70-130	10	35	mg/kg	11.06.19 11:50	
Ethylbenzene	<0.00101	0.101	0.0849	84	0.0723	72	71-129	16	35	mg/kg	11.06.19 11:50	
m,p-Xylenes	<0.00202	0.202	0.173	86	0.155	77	70-135	11	35	mg/kg	11.06.19 11:50	
o-Xylene	<0.00101	0.101	0.0841	83	0.0771	76	71-133	9	35	mg/kg	11.06.19 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		100		70-130	%	11.06.19 11:50
4-Bromofluorobenzene	109		118		70-130	%	11.06.19 11:50

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

Chain of Custody

Work Order No: 642186

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
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	KHenry@ltenv.com wmather@ltenv.com, dmoir@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 330 Flowline
Project Number:	012919191 (2RP-5620)
P.O. Number:	
Sampler's Name:	Kaleb Henry

Turn Around
Routine ☐
Rush: 24h
Due Date:

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	1.5	Thermometer ID	T-NM-007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
BH01	S	11/5/19	1422	0.5'	1	X	X	X	Discrete
BH01A			1428	2.0'	1				
BH02			1433	0.5'	1				
BH02A			1437	2.0'	1				

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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		11/6/19 08:10	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/06/2019 08:10:00 AM

Work Order #: 642186

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)?	1.5
#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: 11/06/2019

Checklist reviewed by: Jessica Kramer Date: 11/06/2019

Analytical Report 644986

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 330

012919191

05-DEC-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 (2019-058), North Carolina (681), Arkansas (19-037-0)

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-Carlsbad (LELAP): Louisiana (05092)
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)

05-DEC-19

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

Reference: XENCO Report No(s): **644986**
PLU 330
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) 644986. 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. 644986 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

Sample Cross Reference 644986

LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-03-19 10:50	0.5 ft	644986-001
FS02	S	12-03-19 10:55	0.5 ft	644986-002
FS03	S	12-03-19 11:00	0.5 ft	644986-003
FS04	S	12-03-19 11:05	0.5 ft	644986-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: PLU 330

Project ID: *012919191*
Work Order Number(s): *644986*

Report Date: *05-DEC-19*
Date Received: *12/04/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109452 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 644986

LT Environmental, Inc., Arvada, CO

Project Name: PLU 330

Project Id: 012919191
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Dec-04-19 08:45 am
Report Date: 05-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644986-001		644986-002		644986-003		644986-004					
	Field Id:	FS01		FS02		FS03		FS04					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Dec-03-19 10:50		Dec-03-19 10:55		Dec-03-19 11:00		Dec-03-19 11:05					
BTEX by EPA 8021B	*Extracted:*	Dec-04-19 10:00		Dec-04-19 10:00		Dec-04-19 10:00		Dec-04-19 10:00					
	Analyzed:	Dec-04-19 15:48		Dec-04-19 16:52		Dec-04-19 17:11		Dec-04-19 17:30					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00395	0.00395	<0.00395	0.00395	<0.00401	0.00401				
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Chloride by EPA 300	*Extracted:*	Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:00		Dec-04-19 13:00					
	Analyzed:	Dec-04-19 18:09		Dec-04-19 18:16		Dec-04-19 18:34		Dec-04-19 18:41					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		332	9.96	863	50.0	560	49.4	1350	49.1				
TPH by SW8015 Mod	*Extracted:*	Dec-04-19 13:30		Dec-04-19 13:30		Dec-04-19 13:30		Dec-04-19 13:30					
	Analyzed:	Dec-04-19 18:16		Dec-04-19 18:35		Dec-04-19 18:35		Dec-04-19 18:55					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3				
Diesel Range Organics (DRO)		52.9	50.1	<49.9	49.9	59.3	50.3	78.6	50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3				
Total GRO-DRO		52.9	50.1	<49.9	49.9	59.3	50.3	78.6	50.3				
Total TPH		52.9	50.1	<49.9	49.9	59.3	50.3	78.6	50.3				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 644986

LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-001	Date Collected:	12.03.19 10.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 13.00	Basis:	Wet Weight
Seq Number:	3109466				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**332**	9.96	mg/kg	12.04.19 18.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.04.19 13.30	Basis:	Wet Weight
Seq Number:	3109453				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.04.19 18.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**52.9**	50.1	mg/kg	12.04.19 18.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.04.19 18.16	U	1
Total GRO-DRO	PHC628	**52.9**	50.1	mg/kg	12.04.19 18.16		1
Total TPH	PHC635	**52.9**	50.1	mg/kg	12.04.19 18.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.04.19 18.16	
o-Terphenyl	84-15-1	110	%	70-135	12.04.19 18.16	

Certificate of Analytical Results 644986

LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-001	Date Collected:	12.03.19 10.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 10.00	Basis:	Wet Weight
Seq Number:	3109452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.04.19 15.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.04.19 15.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.04.19 15.48	
4-Bromofluorobenzene	460-00-4	120	%	70-130	12.04.19 15.48	

Certificate of Analytical Results 644986

LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-002	Date Collected:	12.03.19 10.55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 13.00	Basis:	Wet Weight
Seq Number:	3109466				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**863**	50.0	mg/kg	12.04.19 18.16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.04.19 13.30	Basis:	Wet Weight
Seq Number:	3109453				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.04.19 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.04.19 18.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.04.19 18.35	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.04.19 18.35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.04.19 18.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.04.19 18.35	
o-Terphenyl	84-15-1	122	%	70-135	12.04.19 18.35	

Certificate of Analytical Results 644986

LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-002	Date Collected:	12.03.19 10.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 10.00	Basis:	Wet Weight
Seq Number:	3109452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.04.19 16.52	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 16.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.04.19 16.52	
4-Bromofluorobenzene	460-00-4	112	%	70-130	12.04.19 16.52	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-003	Date Collected:	12.03.19 11.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 13.00	Basis:	Wet Weight
Seq Number:	3109466				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**560**	49.4	mg/kg	12.04.19 18.34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.04.19 13.30	Basis:	Wet Weight
Seq Number:	3109453				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.04.19 18.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**59.3**	50.3	mg/kg	12.04.19 18.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.04.19 18.35	U	1
Total GRO-DRO	PHC628	**59.3**	50.3	mg/kg	12.04.19 18.35		1
Total TPH	PHC635	**59.3**	50.3	mg/kg	12.04.19 18.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.04.19 18.35	
o-Terphenyl	84-15-1	116	%	70-135	12.04.19 18.35	

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LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-003	Date Collected:	12.03.19 11.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 10.00	Basis:	Wet Weight
Seq Number:	3109452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.04.19 17.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.04.19 17.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.04.19 17.11	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.04.19 17.11	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-004	Date Collected:	12.03.19 11.05	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 13.00	Basis:	Wet Weight
Seq Number:	3109466				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1350**	49.1	mg/kg	12.04.19 18.41		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.04.19 13.30	Basis:	Wet Weight
Seq Number:	3109453				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.04.19 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**78.6**	50.3	mg/kg	12.04.19 18.55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.04.19 18.55	U	1
Total GRO-DRO	PHC628	**78.6**	50.3	mg/kg	12.04.19 18.55		1
Total TPH	PHC635	**78.6**	50.3	mg/kg	12.04.19 18.55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	12.04.19 18.55	
o-Terphenyl	84-15-1	114	%	70-135	12.04.19 18.55	

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LT Environmental, Inc., Arvada, CO

PLU 330

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.04.19 08.45
Lab Sample Id:	644986-004	Date Collected:	12.03.19 11.05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.04.19 10.00	Basis:	Wet Weight
Seq Number:	3109452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.04.19 17.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.04.19 17.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.04.19 17.30	
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.04.19 17.30	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 644986

LT Environmental, Inc.

PLU 330

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109466 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691688-1-BLK — LCS Sample Id: 7691688-1-BKS — LCSD Sample Id: 7691688-1-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	262	105	266	106	90-110	2	20	mg/kg	12.04.19 15:56	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109466 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644979-001 — MS Sample Id: 644979-001 S — MSD Sample Id: 644979-001 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	202	219	103	217	103	90-110	1	20	mg/kg	12.04.19 16:34	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3109466 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644985-005 — MS Sample Id: 644985-005 S — MSD Sample Id: 644985-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	942	198	1140	100	1160	109	90-110	2	20	mg/kg	12.04.19 17:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109453 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691711-1-BLK — LCS Sample Id: 7691711-1-BKS — LCSD Sample Id: 7691711-1-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	914	91	940	94	70-135	3	35	mg/kg	12.04.19 15:37	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1140	114	70-135	9	35	mg/kg	12.04.19 15:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		124		130		70-135	%	12.04.19 15:37
o-Terphenyl	108		123		128		70-135	%	12.04.19 15:37

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109453 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691711-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.04.19 15:17	

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 644986

LT Environmental, Inc.

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Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3109453 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644983-001 — MS Sample Id: 644983-001 S — MSD Sample Id: 644983-001 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)	<50.2	1000	902	90	916	91	70-135	2	35	mg/kg	12.04.19 15:57	
Diesel Range Organics (DRO)	62.4	1000	1090	103	1080	101	70-135	1	35	mg/kg	12.04.19 15:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		126		70-135	%	12.04.19 15:57
o-Terphenyl	132		126		70-135	%	12.04.19 15:57

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3109452 — Matrix: Solid — Date Prep: 12.04.19
MB Sample Id: 7691694-1-BLK — LCS Sample Id: 7691694-1-BKS — LCSD Sample Id: 7691694-1-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	0.0892	89	0.0958	96	70-130	7	35	mg/kg	12.04.19 10:39	
Toluene	<0.00200	0.100	0.0913	91	0.0974	97	70-130	6	35	mg/kg	12.04.19 10:39	
Ethylbenzene	<0.00200	0.100	0.0913	91	0.0970	97	71-129	6	35	mg/kg	12.04.19 10:39	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.205	103	70-135	6	35	mg/kg	12.04.19 10:39	
o-Xylene	<0.00200	0.100	0.0970	97	0.103	103	71-133	6	35	mg/kg	12.04.19 10:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		102		70-130	%	12.04.19 10:39
4-Bromofluorobenzene	109		115		115		70-130	%	12.04.19 10:39

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3109452 — Matrix: Soil — Date Prep: 12.04.19
Parent Sample Id: 644979-001 — MS Sample Id: 644979-001 S — MSD Sample Id: 644979-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0903	90	0.0737	74	70-130	20	35	mg/kg	12.04.19 11:18	
Toluene	<0.00200	0.100	0.0910	91	0.0740	74	70-130	21	35	mg/kg	12.04.19 11:18	
Ethylbenzene	<0.00200	0.100	0.0904	90	0.0720	72	71-129	23	35	mg/kg	12.04.19 11:18	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.154	77	70-135	22	35	mg/kg	12.04.19 11:18	
o-Xylene	<0.00200	0.100	0.0963	96	0.0760	76	71-133	24	35	mg/kg	12.04.19 11:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		105		70-130	%	12.04.19 11:18
4-Bromofluorobenzene	119		118		70-130	%	12.04.19 11:18

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: 644986

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
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	enaka@ltenv.com, dmoir@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	PLU 330	Turn Around	
Project Number:	012919141	Routine ☐	
P.O. Number:	Eddy County	Rush: 24 hour	
Sampler's Name:	Elizabeth Naka	Due Date:	

SAMPLE RECEIPT

Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.2	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.7
Sample Custody Seals:	Yes (No) N/A	Total Containers:	4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS01	S	12/3/19	1050	0.5'	1	X	X	X	Composite
FS02	↓	↓	1055	↓	↓	↓	↓	↓	↓
FS03	↓	↓	1100	↓	↓	↓	↓	↓	
FS04	↓	↓	1105	↓	↓	↓	↓	↓	

Elizabeth Naka

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

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 Elizabeth Naka		12-4-2019	2		12/4/19 08:45
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/04/2019 08:45:00 AM

Work Order #: 644986

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
#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: 12/04/2019

Checklist reviewed by: Jessica Kramer Date: 12/05/2019

Jessica Kramer