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	NAB1912657858
District RP	2RP-5389
Facility ID	
Application ID	pAB1912657597

Release Notification

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)* NAB1912657858
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.689127° Longitude -104.126671°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Palmillo State #001H	Site Type Production Well Facility flow line
Date Release Discovered 4/1/2019	API# *(if applicable)* 30-015-23164

Unit Letter	Section	Township	Range	County
J	1	19S	~~28S~~ 28E TM	Eddy

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

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) 0.9	Volume Recovered (bbls) 0.3
☒ Produced Water	Volume Released (bbls) 11.5	Volume Recovered (bbls) 3.7
	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

Fluids were released to the ground from a surface steel flow line due to a hole developed from corrosion. The line was clamped until repairs can be made. A vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912657858
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Facility ID	
Application ID	pAB1912657597

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: Amy C. Ruth Title: SH&E Coordinator

Signature: [signature] Date: 4/15/2019

email: Amy_Ruth@xtoenergy.com Telephone: 575-689-3380

OCD Only

Received by: [signature] Date: 5/6/2019

Incident ID	NAB1912657858
District RP	2RP-5389
Facility ID	
Application ID	pAB 1912657597

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912657858
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 2/27/2020

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

OCD Only

Received by: Cristina Eads Date: 02/28/2020

State of New Mexico
Oil Conservation Division

Incident ID	NAB1912657858
District RP	2RP-5389
Facility ID	
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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: 2/27/2020

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

OCD Only

Received by: Cristina Eads Date: 02/28/2020

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: Denied Date: 04/27/2020

Printed Name: Cristina Eads Title: Environmental Specialist

A proud member of WSP

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

February 27, 2020

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

RE: Closure Request
Palmillo State #001H
Remediation Permit Number 2RP-5389
Incident Number NAB1912657858
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil sampling, and remediation activities for an April 1, 2019 release at the Palmillo State #001H (Site) located in Unit J, Section 1, Township 19 South, Range 28 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and remediation activities was to confirm the presence or absence of and remediate impacts to soil following a release of crude oil and produced water at the Site. Based on the excavation activities, results from the soil confirmation, and delineation sampling activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-5389.

RELEASE BACKGROUND

On October April 1, 2019, 0.9 barrels (bbls) of crude oil and 11.5 bbls of produced water were released to the ground surface due to corrosion of a steel, surface flow line. The line was clamped until repairs could be completed. A vacuum truck was immediately dispatched to the Site, recovering 0.3 bbls of crude oil and 3.7 bbls of produced water. Repairs to the clamped line were completed by XTO personnel. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on Form C-141 on April 15, 2019, and RP Number 2RP-5389 was assigned.

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 groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well 324136104084701, located approximately 6,423 feet west-northwest of the Site (Figure 1). The

groundwater well has a groundwater depth of approximately 151 feet bgs and a total depth of 160 feet bgs. A New Mexico Office of the State Engineer (NMOSE) well, CP 01036, located 3,675 feet to the north, is closer to the Site but has no depth to groundwater data.

The closest continuously flowing water or significant watercourse to the Site is an intermittent dry wash located approximately 590 feet east 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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT

On April 2, 2019, LTE personnel inspected the Site to evaluate the estimated release extent. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS). Surficial staining was observed along the surface flow line, impacting an estimated 927 square feet of pasture. LTE personnel collected and field screened three preliminary soil assessment samples at three locations (SS01, SS02 and SS03) within the release extent. Locations of preliminary soil samples are presented on Figure 2.

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

BTEX, TPH-GRO, TPH-DRO, and/or TPH were reported in the three preliminary assessment soil samples at concentrations exceeding the Site Closure Criteria. The highest concentrations were reported in the area of surface sample SS02 located within the northeastern portion of the release extent. Based on visible staining in the release areas, field screening results, and laboratory analytical results, soil delineation and excavation appeared to be warranted for the release area. Photographic documentation was conducted during the Site visit and is included in Attachment 2.

DELINEATION AND EXCAVATION ACTIVITIES

From November 12 through November 21, 2019, LTE personnel oversaw excavation and delineation activities to remediate impacted soil as indicated by visual observations, field screening results, and laboratory analytical results. Impacted soil delineation was conducted in coordination with excavation activities to assist in defining the vertical and lateral extent of impacted soil exceeding Closure Criteria. Four potholes (PH01 through PH04) were advanced to a depth of 12 feet bgs and two discrete soil samples were collected from each pothole utilizing a backhoe. Soil samples were collected from the depth interval exhibiting the highest potential for impact and from the deepest depth of the pothole. Delineation soil sample locations were collected adjacent to the northern (PH01) and southern (PH02 through PH04) excavation extent and are presented on Figure 3. Soil samples were collected directly from the backhoe bucket from discrete depth intervals. The discrete delineation soil samples were collected, handled, and analyzed as described above. Analytical results for the eight soil samples from the four potholes were below the Site Closure Criteria. Copies of the lithologic/soil sampling logs are provided in Attachment 1.

Excavation activities were performed using track-mounted excavators, loaders, and transport vehicles in areas greater than two feet from the surface flow line. Impacted soil within two feet of the surface flow line was hydro excavated. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing to form one composite sample. Confirmation soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. A total of 11 composite floor soil samples, FS01 through FS08, and 12 composite sidewall samples, SW01 through SW12, were collected from the excavation at depths ranging from ground surface to a maximum depth of 12 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above. The locations of final excavation confirmation samples are presented on Figure 4 and laboratory analytical results are summarized in Table 1.

The excavation extent measured an estimated 1,942 square feet. A total of approximately 626 cubic yards of impacted soil were removed during the excavation activities. The impacted soil

was transported and properly disposed of at the Lea Land Landfill facility located in Hobbs, New Mexico.

On January 14 and 15, 2020, the excavation was backfilled with clean backfill material and re-seeded. Photographic logs documenting the remediation activities are provided in Attachment 2.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for all delineation samples PH01/PH01A through PH04/PH04A indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Confirmation sidewall samples SW02, SW02A and SW03, and floor samples FS07, FS07A, and FS08, contained soil with concentrations of TPH-GRO, TPH-DRO, and TPH exceeding Closure Criteria. Sidewalls near SW02 and SW03 were excavated further laterally until sidewall samples SW02B and SW03A indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. The floor of the excavation near floor samples FS07 and FS08 were excavated deeper until FS07B and FS08A benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. In addition, the excavation ranged from 6 feet to 12 feet in depth and the top 4 feet of material was removed to meet the reclamation standard of 600 mg/kg chloride for areas no longer in use as required by 19.15.29.13.D.1 NMAC. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Approximately 626 cubic yards of impacted soil were excavated from the Site during remediation activities. Composite floor and sidewall samples collected from the excavation indicate that the release impacts have been addressed. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site to concentrations that are compliant with the Closure Criteria.

Based on initial response efforts, remediation activities, and soil sample laboratory analytical results compliant with the Closure Criteria and removal of the top four feet of material, XTO respectfully requests NFA for this April 1, 2019 release with RP Number 2RP-5389.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kevin M. Axe, P.G.
Senior Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office

Appendices:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Lithologic/Soil Sampling Logs
Attachment 2	Photographic Logs
Attachment 3	Laboratory Analytical Reports

FIGURES

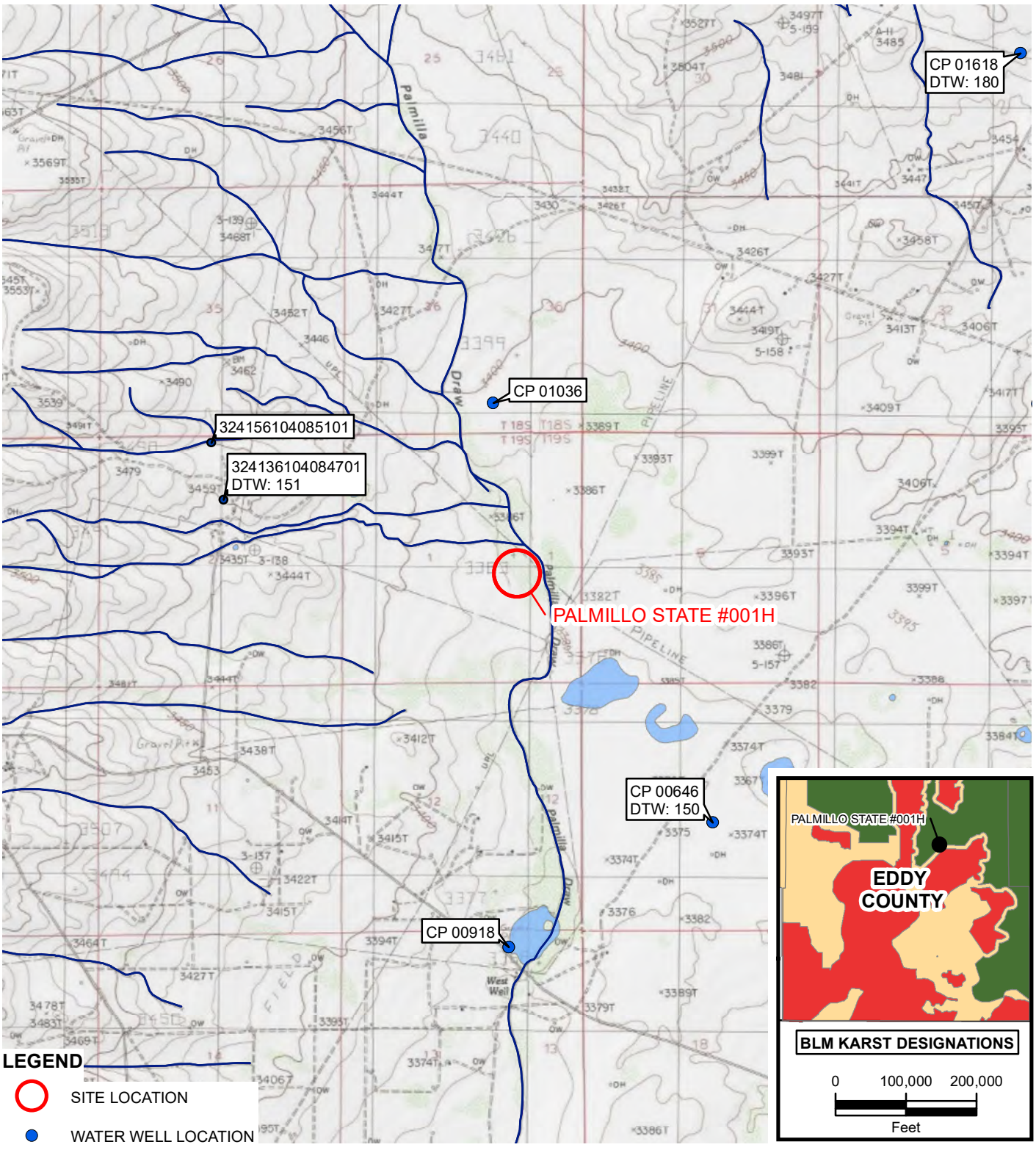
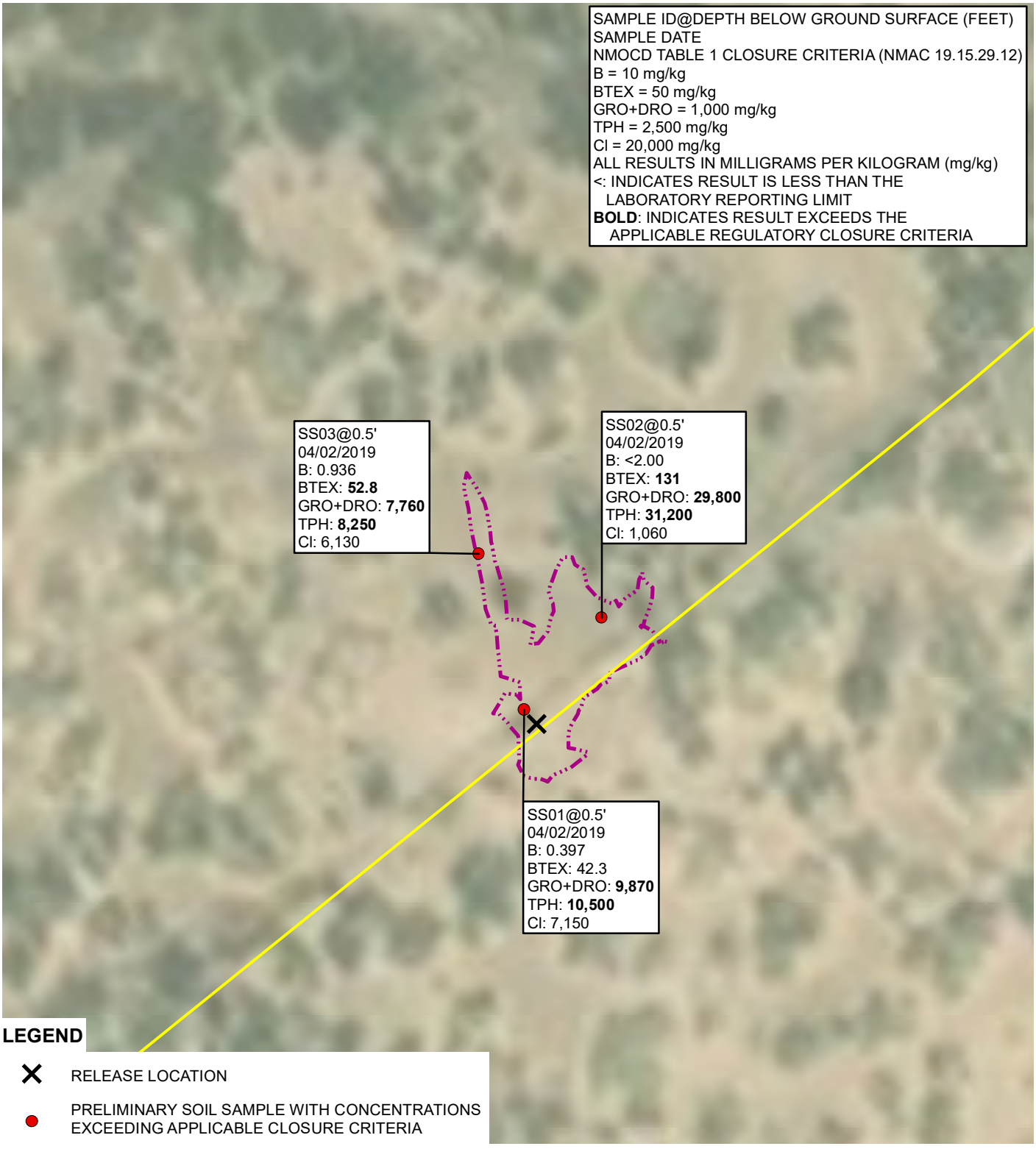


FIGURE 1
SITE LOCATION MAP
PALMILLO STATE #001H
UNIT J SEC 1 T19S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919058_PALMILLO STATE #001H\012919058_FIG01_SL_5389.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-5389

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PALMILLO STATE #001H
UNIT J SEC 1 T19S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919058_PALMILLO STATE #001H\012919058_FIG02_PRELIMINARY_5389.mxd

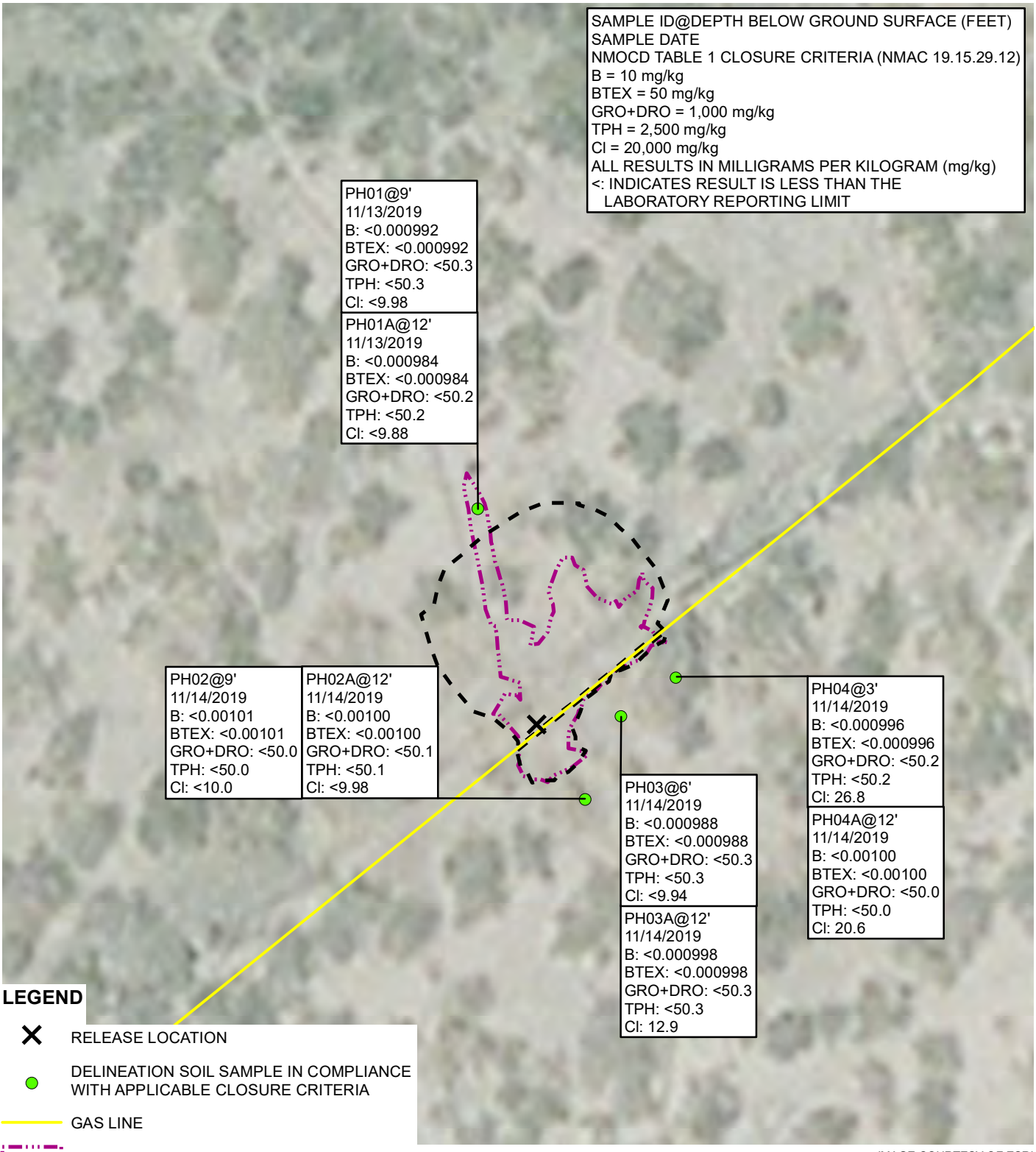
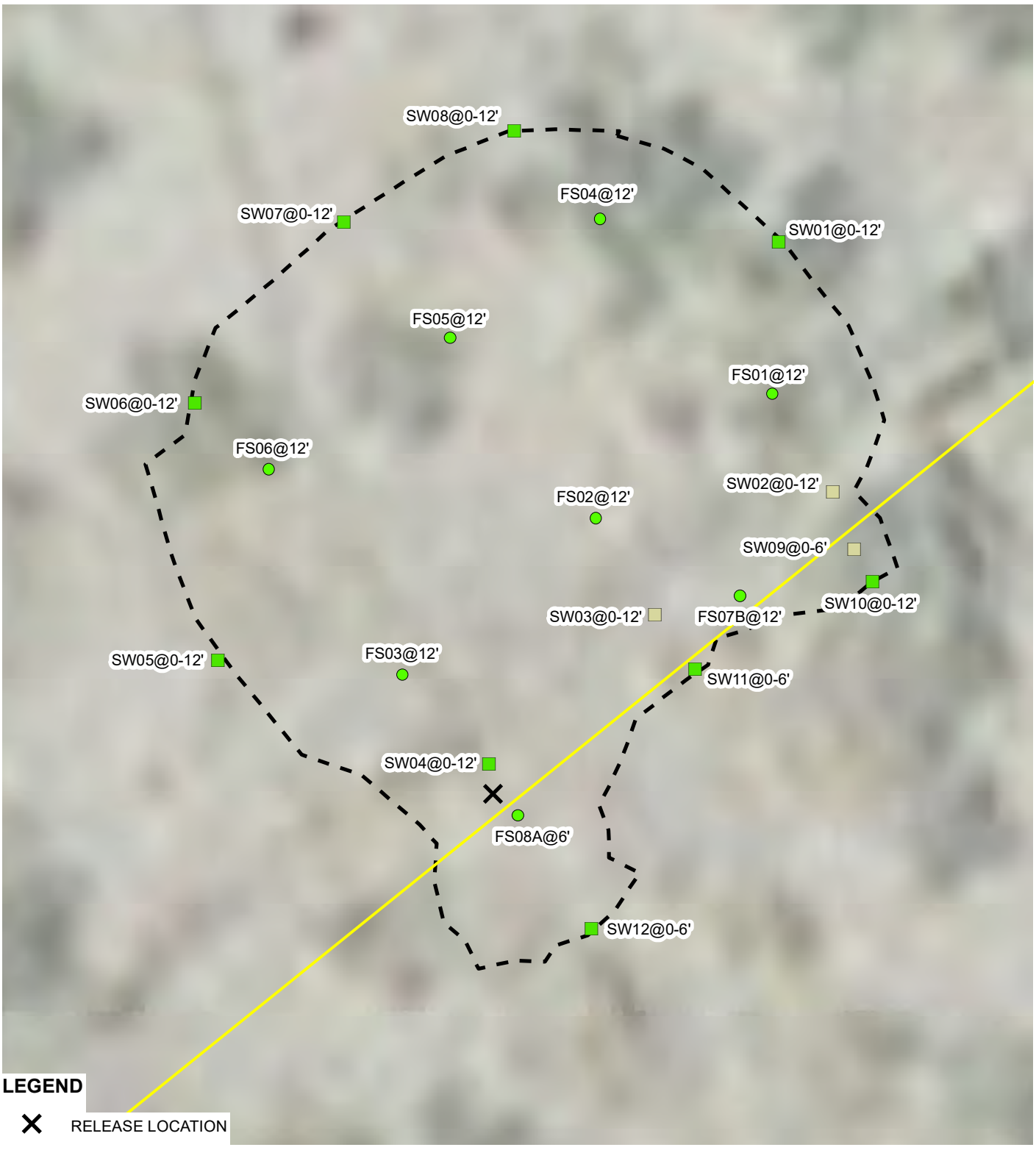


FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
PALMILLO STATE #001H
UNIT J SEC 1 T19S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919058_PALMILLO STATE #001H\012919058_FIG03_DELINEATION_5389.mxd



LEGEND

- RELEASE LOCATION
- SIDEWALL SAMPLE PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA AND HAS BEEN EXCAVATED
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- EXCAVATION EXTENT

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5389

IMAGE COURTESY OF ESRI

0 10 20
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
PALMILLO STATE #001H
UNIT J SEC 1 T19S R28E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919058_PALMILLO STATE #001H\012919058_FIG04_EXCAVATION_5389.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

PALMILLO STATE #001H
REMEDIATION PERMIT NUMBER 2RP-5389
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	04/02/2019	0.397	6.27	4.60	31.0	42.3	2,630	7,240	658	**9,870**	**10,500**	7,150
SS02	0.5	04/02/2019	<2.00	18.3	10.5	103	131	8,420	21,400	1,380	**29,800**	**31,200**	1,060
SS03	0.5	04/02/2019	0.936	10.3	4.37	37.2	**52.8**	2,600	5,160	486	**7,760**	**8,250**	6,130
PH01	9	11/13/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<50.3	<50.3	<50.3	<50.3	<50.3	<9.98
PH01A	12	11/13/2019	<0.000984	<0.000984	<0.000984	<0.000984	<0.000984	<50.2	<50.2	<50.2	<50.2	<50.2	<9.88
PH02	9	11/14/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	<10.0
PH02A	12	11/14/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.1	<50.1	<50.1	<50.1	<50.1	<9.98
PH03	6	11/14/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<50.3	<50.3	<50.3	<50.3	<50.3	<9.94
PH03A	12	11/14/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.3	<50.3	<50.3	<50.3	<50.3	12.9
PH04	3	11/14/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.2	<50.2	<50.2	<50.2	<50.2	26.8
PH04A	12	11/14/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	20.6
SW01	0 - 12	11/13/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.2	<50.2	<50.2	<50.2	<50.2	60.2
SW02	0 - 12	11/13/2019	<0.100	7.71	6.99	58.8	**73.5**	361	861	56.5	**1,220**	1,280	184
SW03	0 - 12	11/13/2019	<0.101	5.11	3.92	33.5	42.5	486	1,970	129	**2,460**	**2,590**	2,110
SW04	0 - 12	11/13/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.3	<50.3	<50.3	<50.3	<50.3	4,460
SW05	0 - 12	11/13/2019	<0.000996	<0.000996	0.00123	0.0108	0.0120	<50.2	<50.2	<50.2	<50.2	<50.2	26.5
SW06	0 - 12	11/13/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.3	<50.3	<50.3	<50.3	<50.3	68.8
SW07	0 - 12	11/13/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	<50.0	<50.0	<50.0	<50.0	25.0
SW08	0 - 12	11/13/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.0	<50.0	<50.0	<50.0	<50.0	338
SW09	0 - 6	11/14/2019	0.00141	0.213	0.201	1.16	1.58	1,260	4,330	256	**5,590**	**5,850**	554
SW10	0 - 12	11/21/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	282
SW11	0 - 6	11/14/2019	<0.00100	0.00193	0.00200	0.0201	0.0240	<50.2	276	52.1	276	328	790
SW12	0 - 6	11/14/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<50.0	74.7	<50.0	74.7	74.7	3,750

TABLE 1
SOIL ANALYTICAL RESULTS

PALMILLO STATE #001H
REMEDIATION PERMIT NUMBER 2RP-5389
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
FS01	12	11/13/2019	<0.000988	<0.000988	<0.000988	<0.000988	<0.000988	<50.0	<50.0	<50.0	<50.0	<50.0	25.9
FS02	12	11/12/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	95.3
FS03	12	11/12/2019	<0.00202	0.00235	<0.00202	0.00666	0.00901	<50.0	<50.0	<50.0	<50.0	<50.0	1,430
FS04	12	11/13/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<50.3	<50.3	<50.3	<50.3	<50.3	13.7
FS05	12	11/12/2019	<0.00200	<0.00200	<0.00200	0.0109	0.0109	<49.9	<49.9	<49.9	<49.9	<49.9	38.5
FS06	12	11/12/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	24.4
FS07	0.5	11/13/2019	<0.00101	<0.00101	<0.00101	0.0167	0.0167	50.8	3,190	267	**3,240**	**3,510**	2,640
FS07A	6	11/14/2019	0.00177	0.234	0.147	1.13	1.51	769	2,960	176	**3,730**	**3,910**	774
FS07B	12	11/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	860
FS08	0.5	11/13/2019	0.00242	0.00471	0.0998	0.133	0.240	182	3,310	285	**3,490**	**3,780**	81.1
FS08A	6	11/14/2019	<0.00101	<0.00101	<0.00101	0.0156	0.0156	<50.1	94.9	<50.1	94.9	94.9	3,610

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentrationin the top 4 feet of soil is 600 mg/kg

ATTACHMENT 1: LITHOLOGIC/SOIL SAMPLING LOGS

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

Identifier: PH01	Date: 11/13/19
Project Name: Palmillo 3H #001H Flowline	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth: 12'
Field Screening:	
Lat/Long:	

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	7.2	N		0–1		S	OL, organic silty clay, low plasticity, roots throughout, dark brwn
Dry	"	12.0	N		3		S	SP, white-tan (beige), SC fine grained, no odor, high porosity
Dry	"	1.5	N		6		S	tan, caliche, GP, gravel-sand mix, no odor
Dry	"	29.5	N		9		S	
Dry	"	10.5	N		12		S	

deepest sample @ 12'

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

Identifier: PH02	Date: 11/14/19
Project Name: Palmillo St #001H Flowline	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth: 12'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.4	N		0–2		S	OL, organic silty clay, low plasticity, roots throughout, drk brwn ↓
Dry	"	0.3	N		3–5		S	SP, beige, fine grained, no odor, high porosity, sc ↓
Dry	"	0.6	N		6–8		S	tan, GP, caliche, gravel-sand mix, no odor ↓
Dry	"	0.8	N		9–11		S	↓
Dry	"	0.7	N		12		S	↓

deepest sample @ 12'

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

Identifier: PH03	Date: 11/14/19
Project Name: Palmillo St #001H Flowline	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth: 12'
Lat/Long:	Field Screening:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.6	N		0–2		S	OL, organic silty clay, low plasticity, roots throughout, drk brwn ↓
Dry	"	0.6	N		3–5		S	SP, fine grained, beige, no odor, high porosity, sc ↓
Dry	"	0.7	N		6–8		S	GP, caliche, tan, gravel-sand mix, no odor ↓
Dry	"	0.5	N		9–11		S	↓
Dry	"	0.9	N		12		S	↓

deepest sample @ 12'

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

Identifier: PH04	Date: 11/14/19
Project Name: Palmillo St #001H Flowline	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth: 12'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.0	N		0–2		S	OL, drk brwn, low plasticity, roots, organic silty clay
Dry	"	0.8	N		3–5		S	SP, beige, fine grained, no odor, high porosity, SC
Dry	"	0.7	N		6–8		S	caliche, GP, tan, gravel-sand mix, no odor
Dry	"	0.7	N		9–11		S	
Dry	"	0.8	N		12		S	

deepest sample @ 12'

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: Northeast facing view of the release extent.

Photograph 2: Eastern view of site during excavation activities.

Photograph 3: Eastern view of site during Hydro-excavation activities.

Photograph 4: View of backfilled excavation after re-seeding.

Site Name : Palmillo State #001H
Site Location : 32.689127, -104.126671
Photographs Taken: November 12 through January 21, 2020

A proud member of WSP

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 643336

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo St #001H Flowline

012919058

18-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)

18-NOV-19

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

Reference: XENCO Report No(s): **643336**
Palmillo St #001H 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) 643336. 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. 643336 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH02	S	11-14-19 09:05	9 ft	643336-001
PH02A	S	11-14-19 09:14	12 ft	643336-002
PH03	S	11-14-19 09:39	6 ft	643336-003
PH03A	S	11-14-19 09:55	12 ft	643336-004
PH04	S	11-14-19 10:13	3 ft	643336-005
PH04A	S	11-14-19 10:35	12 ft	643336-006

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Palmillo St #001H Flowline

Project ID: *012919058*
Work Order Number(s): *643336*

Report Date: *18-NOV-19*
Date Received: *11/15/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107747 BTEX by EPA 8021B

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

Certificate of Analysis Summary 643336

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Nov-15-19 10:10 am
Report Date: 18-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	643336-001		643336-002		643336-003		643336-004		643336-005		643336-006	
	Field Id:	PH02		PH02A		PH03		PH03A		PH04		PH04A	
	Depth:	9- ft		12- ft		6- ft		12- ft		3- ft		12- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-14-19 09:05		Nov-14-19 09:14		Nov-14-19 09:39		Nov-14-19 09:55		Nov-14-19 10:13		Nov-14-19 10:35	
BTEX by EPA 8021B	***Extracted:***	Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11	
	Analyzed:	Nov-15-19 15:48		Nov-15-19 16:09		Nov-15-19 16:29		Nov-15-19 16:50		Nov-15-19 17:10		Nov-15-19 17:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
Toluene		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
Ethylbenzene		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
m,p-Xylenes		<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
o-Xylene		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
Total Xylenes		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
Total BTEX		<0.00101	0.00101	<0.00100	0.00100	<0.000988	0.000988	<0.000998	0.000998	<0.000996	0.000996	<0.00100	0.00100
Chloride by EPA 300	***Extracted:***	Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00	
	Analyzed:	Nov-15-19 17:20		Nov-15-19 17:26		Nov-15-19 17:32		Nov-15-19 17:39		Nov-15-19 17:45		Nov-15-19 17:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<10.0	10.0	<9.98	9.98	<9.94	9.94	12.9	9.98	26.8	10.1	20.6	10.0
TPH by SW8015 Mod	***Extracted:***	Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00	
	Analyzed:	Nov-15-19 20:21		Nov-15-19 20:42		Nov-15-19 21:02		Nov-15-19 21:22		Nov-15-19 21:43		Nov-15-19 22:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.1	50.1	<50.3	50.3	<50.3	50.3	<50.2	50.2	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.1	50.1	<50.3	50.3	<50.3	50.3	<50.2	50.2	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	<50.3	50.3	<50.3	50.3	<50.2	50.2	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<50.1	50.1	<50.3	50.3	<50.3	50.3	<50.2	50.2	<50.0	50.0
Total TPH		<50.0	50.0	<50.1	50.1	<50.3	50.3	<50.3	50.3	<50.2	50.2	<50.0	50.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-001	Date Collected:	11.14.19 09.05	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	11.15.19 17.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.15.19 20.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.15.19 20.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.15.19 20.21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.15.19 20.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.15.19 20.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	11.15.19 20.21	
o-Terphenyl	84-15-1	120	%	70-135	11.15.19 20.21	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-001	Date Collected:	11.14.19 09.05	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.15.19 15.48	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.15.19 15.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	11.15.19 15.48	
1,4-Difluorobenzene	540-36-3	97	%	70-130	11.15.19 15.48	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-002	Date Collected:	11.14.19 09.14	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	11.15.19 17.26	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.15.19 20.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.15.19 20.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.15.19 20.42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.15.19 20.42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.15.19 20.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	11.15.19 20.42	
o-Terphenyl	84-15-1	126	%	70-135	11.15.19 20.42	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-002	Date Collected:	11.14.19 09.14	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.15.19 16.09	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.15.19 16.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	126	%	70-130	11.15.19 16.09	
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.15.19 16.09	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-003	Date Collected:	11.14.19 09.39	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	11.15.19 17.32	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.15.19 21.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.15.19 21.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.15.19 21.02	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.15.19 21.02	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.15.19 21.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.15.19 21.02	
o-Terphenyl	84-15-1	112	%	70-135	11.15.19 21.02	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-003	Date Collected:	11.14.19 09.39	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.15.19 16.29	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1
Total BTEX		<0.000988	0.000988	mg/kg	11.15.19 16.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.15.19 16.29	
4-Bromofluorobenzene	460-00-4	128	%	70-130	11.15.19 16.29	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-004	Date Collected:	11.14.19 09.55	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.9**	9.98	mg/kg	11.15.19 17.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.15.19 21.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.15.19 21.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.15.19 21.22	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.15.19 21.22	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.15.19 21.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.15.19 21.22	
o-Terphenyl	84-15-1	105	%	70-135	11.15.19 21.22	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-004	Date Collected:	11.14.19 09.55	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.15.19 16.50	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.15.19 16.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.15.19 16.50	
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.15.19 16.50	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-005	Date Collected:	11.14.19 10.13	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.8**	10.1	mg/kg	11.15.19 17.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.15.19 21.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.15.19 21.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.15.19 21.43	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.15.19 21.43	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.15.19 21.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.15.19 21.43	
o-Terphenyl	84-15-1	111	%	70-135	11.15.19 21.43	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-005	Date Collected:	11.14.19 10.13	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.15.19 17.10	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.15.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.15.19 17.10	
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.15.19 17.10	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-006	Date Collected:	11.14.19 10.35	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.6**	10.0	mg/kg	11.15.19 17.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.15.19 22.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.15.19 22.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.15.19 22.03	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.15.19 22.03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.15.19 22.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	11.15.19 22.03	
o-Terphenyl	84-15-1	106	%	70-135	11.15.19 22.03	

Certificate of Analytical Results 643336

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643336-006	Date Collected:	11.14.19 10.35	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.15.19 17.31	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.15.19 17.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.15.19 17.31	
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.15.19 17.31	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 643336

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690447-1-BLK — LCS Sample Id: 7690447-1-BKS — LCSD Sample Id: 7690447-1-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	247	99	247	99	90-110	0	20	mg/kg	11.15.19 16:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643336-006 — MS Sample Id: 643336-006 S — MSD Sample Id: 643336-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.6	201	218	98	226	103	90-110	4	20	mg/kg	11.15.19 17:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643339-001 — MS Sample Id: 643339-001 S — MSD Sample Id: 643339-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	554	200	751	99	762	103	90-110	1	20	mg/kg	11.15.19 16:29	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690492-1-BLK — LCS Sample Id: 7690492-1-BKS — LCSD Sample Id: 7690492-1-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	1030	103	985	99	70-135	4	35	mg/kg	11.15.19 17:37	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1000	100	70-135	5	35	mg/kg	11.15.19 17:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		123		116		70-135	%	11.15.19 17:37
o-Terphenyl	114		116		109		70-135	%	11.15.19 17:37

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690492-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.15.19 17:17	

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 643336

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643273-020 — MS Sample Id: 643273-020 S — MSD Sample Id: 643273-020 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)	<49.8	996	1160	116	1140	114	70-135	2	35	mg/kg	11.15.19 18:39	
Diesel Range Organics (DRO)	237	996	1110	88	1150	91	70-135	4	35	mg/kg	11.15.19 18:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		132		70-135	%	11.15.19 18:39
o-Terphenyl	130		128		70-135	%	11.15.19 18:39

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107747 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690487-1-BLK — LCS Sample Id: 7690487-1-BKS — LCSD Sample Id: 7690487-1-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	0.127	127	0.120	120	70-130	6	35	mg/kg	11.15.19 13:52	
Toluene	<0.000500	0.100	0.126	126	0.119	119	70-130	6	35	mg/kg	11.15.19 13:52	
Ethylbenzene	<0.00100	0.100	0.128	128	0.120	120	71-129	6	35	mg/kg	11.15.19 13:52	
m,p-Xylenes	<0.00200	0.200	0.257	129	0.243	122	70-135	6	35	mg/kg	11.15.19 13:52	
o-Xylene	<0.00100	0.100	0.128	128	0.122	122	71-133	5	35	mg/kg	11.15.19 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		98		70-130	%	11.15.19 13:52
4-Bromofluorobenzene	126		125		116		70-130	%	11.15.19 13:52

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107747 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643336-001 — MS Sample Id: 643336-001 S — MSD Sample Id: 643336-001 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	0.0915	91	0.127	127	70-130	32	35	mg/kg	11.15.19 14:33	
Toluene	<0.00101	0.101	0.0926	92	0.125	125	70-130	30	35	mg/kg	11.15.19 14:33	
Ethylbenzene	<0.00101	0.101	0.0951	94	0.127	127	71-129	29	35	mg/kg	11.15.19 14:33	
m,p-Xylenes	<0.00201	0.201	0.192	96	0.256	128	70-135	29	35	mg/kg	11.15.19 14:33	
o-Xylene	<0.00101	0.101	0.0965	96	0.129	129	71-133	29	35	mg/kg	11.15.19 14:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		99		70-130	%	11.15.19 14:33
4-Bromofluorobenzene	130		102		70-130	%	11.15.19 14:33

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

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 643336

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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:		fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Palmillo St #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.0	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:	6

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH02	S	11/14/19	0905	9'	1	X	X	X
PH02A	S		0914	12'				
PH03	S		0939	6'				
PH03A	S		0955	12'				
PH04	S		1013	3'				
PH04A	S		1035	12'				

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11/15/2019 0959	2		11/15/19 1010
3				4		
5				6		

Revised Date 101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/15/2019 10:10:00 AM

Work Order #: 643336

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 11/15/2019

Checklist reviewed by: Jessica Kramer Date: 11/15/2019

Jessica Kramer

Analytical Report 643199

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo St #001H Flowline

012919058

15-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)

15-NOV-19

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

Reference: XENCO Report No(s): **643199**
Palmillo St #001H 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) 643199. 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. 643199 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 643199

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	11-13-19 14:00	9 ft	643199-001
PH01A	S	11-13-19 14:13	12 ft	643199-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Palmillo St #001H Flowline

Project ID: *012919058*
Work Order Number(s): *643199*

Report Date: *15-NOV-19*
Date Received: *11/14/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107592 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643199-002.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 643199

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Nov-14-19 11:30 am
Report Date: 15-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	643199-001			643199-002								
	Field Id:	PH01			PH01A								
	Depth:	9- ft			12- ft								
	Matrix:	SOIL			SOIL								
	Sampled:	Nov-13-19 14:00			Nov-13-19 14:13								
BTEX by EPA 8021B	***Extracted:***	Nov-14-19 12:11			Nov-14-19 12:11								
	Analyzed:	Nov-14-19 22:03			Nov-14-19 22:24								
	Units/RL:	mg/kg	RL		mg/kg	RL							
Benzene		<0.000992	0.000992		<0.000984	0.000984							
Toluene		<0.000992	0.000992		<0.000984	0.000984							
Ethylbenzene		<0.000992	0.000992		<0.000984	0.000984							
m,p-Xylenes		<0.00198	0.00198		<0.00197	0.00197							
o-Xylene		<0.000992	0.000992		<0.000984	0.000984							
Total Xylenes		<0.000992	0.000992		<0.000984	0.000984							
Total BTEX		<0.000992	0.000992		<0.000984	0.000984							
Chloride by EPA 300	***Extracted:***	Nov-14-19 13:11			Nov-14-19 13:11								
	Analyzed:	Nov-14-19 17:36			Nov-14-19 17:41								
	Units/RL:	mg/kg	RL		mg/kg	RL							
Chloride		<9.98	9.98		<9.88	9.88							
TPH by SW8015 Mod	***Extracted:***	Nov-14-19 17:00			Nov-14-19 17:00								
	Analyzed:	Nov-15-19 14:29			Nov-15-19 14:50								
	Units/RL:	mg/kg	RL		mg/kg	RL							
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3		<50.2	50.2							
Diesel Range Organics (DRO)		<50.3	50.3		<50.2	50.2							
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3		<50.2	50.2							
Total GRO-DRO		<50.3	50.3		<50.2	50.2							
Total TPH		<50.3	50.3		<50.2	50.2							

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 643199

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643199-001	Date Collected:	11.13.19 14.00	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.11	Basis:	Wet Weight
Seq Number:	3107612				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	11.14.19 17.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 17.00	Basis:	Wet Weight
Seq Number:	3107677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.15.19 14.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.15.19 14.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.15.19 14.29	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.15.19 14.29	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.15.19 14.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	11.15.19 14.29	
o-Terphenyl	84-15-1	98	%	70-135	11.15.19 14.29	

Certificate of Analytical Results 643199

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643199-001	Date Collected:	11.13.19 14.00	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.14.19 22.03	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1
Total BTEX		<0.000992	0.000992	mg/kg	11.14.19 22.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.14.19 22.03	
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.14.19 22.03	

Certificate of Analytical Results 643199

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643199-002	Date Collected:	11.13.19 14.13	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.11	Basis:	Wet Weight
Seq Number:	3107612				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.88	9.88	mg/kg	11.14.19 17.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 17.00	Basis:	Wet Weight
Seq Number:	3107677				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.15.19 14.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.15.19 14.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.15.19 14.50	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.15.19 14.50	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.15.19 14.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.15.19 14.50	
o-Terphenyl	84-15-1	101	%	70-135	11.15.19 14.50	

Certificate of Analytical Results 643199

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643199-002	Date Collected:	11.13.19 14.13	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1
Toluene	108-88-3	<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1
Ethylbenzene	100-41-4	<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1
m,p-Xylenes	179601-23-1	<0.00197	0.00197	mg/kg	11.14.19 22.24	U	1
o-Xylene	95-47-6	<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1
Total Xylenes	1330-20-7	<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1
Total BTEX		<0.000984	0.000984	mg/kg	11.14.19 22.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	134	%	70-130	11.14.19 22.24	**
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.14.19 22.24	

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 643199

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107612 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690440-1-BLK — LCS Sample Id: 7690440-1-BKS — LCSD Sample Id: 7690440-1-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	247	99	248	99	90-110	0	20	mg/kg	11.14.19 16:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107612 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643195-002 — MS Sample Id: 643195-002 S — MSD Sample Id: 643195-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	289	198	491	102	487	100	90-110	1	20	mg/kg	11.14.19 17:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107612 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643204-001 — MS Sample Id: 643204-001 S — MSD Sample Id: 643204-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	230	200	440	105	435	103	90-110	1	20	mg/kg	11.14.19 16:43	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107677 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690450-1-BLK — LCS Sample Id: 7690450-1-BKS — LCSD Sample Id: 7690450-1-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	983	98	916	92	70-135	7	35	mg/kg	11.15.19 08:24	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1030	103	70-135	6	35	mg/kg	11.15.19 08:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		134		125		70-135	%	11.15.19 08:24
o-Terphenyl	114		120		110		70-135	%	11.15.19 08:24

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107677 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690450-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.15.19 08:04	

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

QC Summary 643199

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107677 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643198-033 — MS Sample Id: 643198-033 S — MSD Sample Id: 643198-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	917	91	905	91	70-135	1	35	mg/kg	11.15.19 09:24	
Diesel Range Organics (DRO)	<50.3	1010	1040	103	1020	102	70-135	2	35	mg/kg	11.15.19 09:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		110		70-135	%	11.15.19 09:24
o-Terphenyl	109		112		70-135	%	11.15.19 09:24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107592 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690408-1-BLK — LCS Sample Id: 7690408-1-BKS — LCSD Sample Id: 7690408-1-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	0.120	120	0.117	117	70-130	3	35	mg/kg	11.14.19 13:26	
Toluene	<0.00100	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	11.14.19 13:26	
Ethylbenzene	<0.00100	0.100	0.121	121	0.117	117	71-129	3	35	mg/kg	11.14.19 13:26	
m,p-Xylenes	<0.00200	0.200	0.241	121	0.232	116	70-135	4	35	mg/kg	11.14.19 13:26	
o-Xylene	<0.00100	0.100	0.122	122	0.117	117	71-133	4	35	mg/kg	11.14.19 13:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		97		70-130	%	11.14.19 13:26
4-Bromofluorobenzene	120		123		123		70-130	%	11.14.19 13:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107592 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643201-001 — MS Sample Id: 643201-001 S — MSD Sample Id: 643201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000988	0.0988	0.108	109	0.0909	92	70-130	17	35	mg/kg	11.14.19 14:47	
Toluene	<0.000988	0.0988	0.109	110	0.0919	93	70-130	17	35	mg/kg	11.14.19 14:47	
Ethylbenzene	<0.000988	0.0988	0.105	106	0.0998	101	71-129	5	35	mg/kg	11.14.19 14:47	
m,p-Xylenes	<0.00198	0.198	0.231	117	0.202	102	70-135	13	35	mg/kg	11.14.19 14:47	
o-Xylene	0.000544	0.0988	0.107	108	0.0998	100	71-133	7	35	mg/kg	11.14.19 14:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	11.14.19 14:47
4-Bromofluorobenzene	126		128		70-130	%	11.14.19 14:47

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

Chain of Custody

Work Order No: 643199

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

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

Project Name:	Palmillo St #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.0	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	11/13/19	9'	1400	1	X	X	X
PH01A	S	11/13/19	12'	1413	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima Smith	Anna Byers	11/14/19 0910	2 Anna Byers	Courtney	11/14/19 11:30
3				4		
5				6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/14/2019 11:30:00 AM

Work Order #: 643199

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 11/14/2019

Checklist reviewed by: Jessica Kramer Date: 11/15/2019

Analytical Report 643201

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo St #001H Flowline

012919058

15-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)

15-NOV-19

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

Reference: XENCO Report No(s): **643201**
Palmillo St #001H 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) 643201. 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. 643201 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	11-13-19 08:56	12 ft	643201-001
FS04	S	11-13-19 09:00	12 ft	643201-002
SW01	S	11-13-19 09:31	0 - 12 ft	643201-003
SW02	S	11-13-19 09:34	0 - 12 ft	643201-004
SW03	S	11-13-19 09:36	0 - 12 ft	643201-005
SW04	S	11-13-19 09:39	0 - 12 ft	643201-006
SW05	S	11-13-19 10:23	0 - 12 ft	643201-007
SW06	S	11-13-19 10:26	0 - 12 ft	643201-008
SW07	S	11-13-19 10:39	0 - 12 ft	643201-009
SW08	S	11-13-19 10:41	0 - 12 ft	643201-010
FS07	S	11-13-19 12:43	0.5 ft	643201-011
FS08	S	11-13-19 12:46	0.5 ft	643201-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Palmillo St #001H Flowline

Project ID: *012919058*
Work Order Number(s): *643201*

Report Date: *15-NOV-19*
Date Received: *11/14/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107585 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643201-005.

Batch: LBA-3107592 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3107605 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643201-011.

Certificate of Analysis Summary 643201

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Nov-14-19 11:30 am
Report Date: 15-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	643201-001		643201-002		643201-003		643201-004		643201-005		643201-006	
	Field Id:	FS01		FS04		SW01		SW02		SW03		SW04	
	Depth:	12- ft		12- ft		0-12 ft		0-12 ft		0-12 ft		0-12 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-13-19 08:56		Nov-13-19 09:00		Nov-13-19 09:31		Nov-13-19 09:34		Nov-13-19 09:36		Nov-13-19 09:39	
BTEX by EPA 8021B	***Extracted:***	Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11	
	Analyzed:	Nov-14-19 15:42		Nov-14-19 16:02		Nov-14-19 16:23		Nov-14-19 22:44		Nov-14-19 23:04		Nov-14-19 16:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	<0.100	0.100	<0.101	0.101	<0.00101	0.00101
Toluene		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	7.71	0.100	5.11	0.101	<0.00101	0.00101
Ethylbenzene		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	6.99	0.100	3.92	0.101	<0.00101	0.00101
m,p-Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	40.0	0.201	23.0	0.202	<0.00201	0.00201
o-Xylene		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	18.8	0.100	10.5	0.101	<0.00101	0.00101
Total Xylenes		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	58.8	0.100	33.5	0.101	<0.00101	0.00101
Total BTEX		<0.000988	0.000988	<0.000996	0.000996	<0.00101	0.00101	73.5	0.100	42.5	0.101	<0.00101	0.00101
Chloride by EPA 300	***Extracted:***	Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00	
	Analyzed:	Nov-14-19 14:33		Nov-14-19 14:39		Nov-14-19 14:45		Nov-14-19 15:03		Nov-14-19 15:09		Nov-14-19 15:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		25.9	9.84	13.7	9.88	60.2	9.98	184	10.0	2110	100	4460	200
TPH by SW8015 Mod	***Extracted:***	Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 14:00	
	Analyzed:	Nov-15-19 14:09		Nov-14-19 20:00		Nov-15-19 12:06		Nov-14-19 20:41		Nov-14-19 21:01		Nov-14-19 21:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.3	50.3	<50.2	50.2	361	50.1	486	50.1	<50.3	50.3
Diesel Range Organics (DRO)		<50.0	50.0	<50.3	50.3	<50.2	50.2	861	50.1	1970	50.1	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.3	50.3	<50.2	50.2	56.5	50.1	129	50.1	<50.3	50.3
Total GRO-DRO		<50.0	50.0	<50.3	50.3	<50.2	50.2	1220	50.1	2460	50.1	<50.3	50.3
Total TPH		<50.0	50.0	<50.3	50.3	<50.2	50.2	1280	50.1	2590	50.1	<50.3	50.3

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 643201

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Nov-14-19 11:30 am
Report Date: 15-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	643201-007		643201-008		643201-009		643201-010		643201-011		643201-012	
	Field Id:	SW05		SW06		SW07		SW08		FS07		FS08	
	Depth:	0-12 ft		0-12 ft		0-12 ft		0-12 ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-13-19 10:23		Nov-13-19 10:26		Nov-13-19 10:39		Nov-13-19 10:41		Nov-13-19 12:43		Nov-13-19 12:46	
BTEX by EPA 8021B	***Extracted:***	Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11		Nov-14-19 12:11	
	Analyzed:	Nov-14-19 17:04		Nov-14-19 17:24		Nov-14-19 17:44		Nov-14-19 18:05		Nov-14-19 18:25		Nov-14-19 18:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000996	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	0.00242	0.00101
Toluene		<0.000996	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	0.00471	0.00101
Ethylbenzene		0.00123	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	<0.00101	0.00101	0.0998	0.00101
m,p-Xylenes		0.00654	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	0.00366	0.00202	0.0732	0.00201
o-Xylene		0.00422	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.0130	0.00101	0.0599	0.00101
Total Xylenes		0.0108	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.0167	0.00101	0.133	0.00101
Total BTEX		0.0120	0.000996	<0.00100	0.00100	<0.00101	0.00101	<0.000998	0.000998	0.0167	0.00101	0.240	0.00101
Chloride by EPA 300	***Extracted:***	Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00		Nov-14-19 13:00	
	Analyzed:	Nov-14-19 15:20		Nov-14-19 15:26		Nov-14-19 15:44		Nov-14-19 15:50		Nov-14-19 15:56		Nov-14-19 16:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		26.5	9.86	68.8	9.88	25.0	9.92	338	9.82	2640	99.8	81.1	9.92
TPH by SW8015 Mod	***Extracted:***	Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 14:00		Nov-14-19 16:11		Nov-14-19 16:11		Nov-14-19 16:11	
	Analyzed:	Nov-14-19 21:41		Nov-15-19 12:26		Nov-14-19 22:22		Nov-15-19 12:47		Nov-15-19 01:03		Nov-15-19 01:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.0	50.0	50.8	49.7	182	49.8
Diesel Range Organics (DRO)		<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.0	50.0	3190	49.7	3310	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.0	50.0	267	49.7	285	49.8
Total GRO-DRO		<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.0	50.0	3240	49.7	3490	49.8
Total TPH		<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.0	50.0	3510	49.7	3780	49.8

Jessica Kramer
Project Assistant

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-001	Date Collected:	11.13.19 08.56	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.9**	9.84	mg/kg	11.14.19 14.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.15.19 14.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.15.19 14.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.15.19 14.09	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.15.19 14.09	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.15.19 14.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	11.15.19 14.09	
o-Terphenyl	84-15-1	113	%	70-135	11.15.19 14.09	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-001	Date Collected:	11.13.19 08.56	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1
Toluene	108-88-3	<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1
Ethylbenzene	100-41-4	<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.14.19 15.42	U	1
o-Xylene	95-47-6	<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1
Total Xylenes	1330-20-7	<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1
Total BTEX		<0.000988	0.000988	mg/kg	11.14.19 15.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.19 15.42	
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.14.19 15.42	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-002	Date Collected:	11.13.19 09.00	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.7**	9.88	mg/kg	11.14.19 14.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.14.19 20.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.14.19 20.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.14.19 20.00	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.14.19 20.00	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.14.19 20.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	11.14.19 20.00	
o-Terphenyl	84-15-1	76	%	70-135	11.14.19 20.00	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-002	Date Collected:	11.13.19 09.00	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.14.19 16.02	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1
Total BTEX		<0.000996	0.000996	mg/kg	11.14.19 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.14.19 16.02	
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.14.19 16.02	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-003	Date Collected:	11.13.19 09.31	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.2**	9.98	mg/kg	11.14.19 14.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.15.19 12.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.15.19 12.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.15.19 12.06	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.15.19 12.06	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.15.19 12.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	11.15.19 12.06	
o-Terphenyl	84-15-1	130	%	70-135	11.15.19 12.06	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-003	Date Collected:	11.13.19 09.31	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.14.19 16.23	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.14.19 16.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.14.19 16.23	
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.14.19 16.23	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-004	Date Collected:	11.13.19 09.34	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	10.0	mg/kg	11.14.19 15.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**361**	50.1	mg/kg	11.14.19 20.41		1
Diesel Range Organics (DRO)	C10C28DRO	**861**	50.1	mg/kg	11.14.19 20.41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**56.5**	50.1	mg/kg	11.14.19 20.41		1
Total GRO-DRO	PHC628	**1220**	50.1	mg/kg	11.14.19 20.41		1
Total TPH	PHC635	**1280**	50.1	mg/kg	11.14.19 20.41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	11.14.19 20.41	
o-Terphenyl	84-15-1	135	%	70-135	11.14.19 20.41	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-004	Date Collected:	11.13.19 09.34	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.100	0.100	mg/kg	11.14.19 22.44	U	100
Toluene	108-88-3	**7.71**	0.100	mg/kg	11.14.19 22.44		100
Ethylbenzene	100-41-4	**6.99**	0.100	mg/kg	11.14.19 22.44		100
m,p-Xylenes	179601-23-1	**40.0**	0.201	mg/kg	11.14.19 22.44		100
o-Xylene	95-47-6	**18.8**	0.100	mg/kg	11.14.19 22.44		100
Total Xylenes	1330-20-7	**58.8**	0.100	mg/kg	11.14.19 22.44		100
Total BTEX		**73.5**	0.100	mg/kg	11.14.19 22.44		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	11.14.19 22.44	
1,4-Difluorobenzene	540-36-3	93	%	70-130	11.14.19 22.44	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-005	Date Collected:	11.13.19 09.36	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2110**	100	mg/kg	11.14.19 15.09		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**486**	50.1	mg/kg	11.14.19 21.01		1
Diesel Range Organics (DRO)	C10C28DRO	**1970**	50.1	mg/kg	11.14.19 21.01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**129**	50.1	mg/kg	11.14.19 21.01		1
Total GRO-DRO	PHC628	**2460**	50.1	mg/kg	11.14.19 21.01		1
Total TPH	PHC635	**2590**	50.1	mg/kg	11.14.19 21.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	148	%	70-135	11.14.19 21.01	**
o-Terphenyl	84-15-1	146	%	70-135	11.14.19 21.01	**

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-005	Date Collected:	11.13.19 09.36	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.101	0.101	mg/kg	11.14.19 23.04	U	100
Toluene	108-88-3	**5.11**	0.101	mg/kg	11.14.19 23.04		100
Ethylbenzene	100-41-4	**3.92**	0.101	mg/kg	11.14.19 23.04		100
m,p-Xylenes	179601-23-1	**23.0**	0.202	mg/kg	11.14.19 23.04		100
o-Xylene	95-47-6	**10.5**	0.101	mg/kg	11.14.19 23.04		100
Total Xylenes	1330-20-7	**33.5**	0.101	mg/kg	11.14.19 23.04		100
Total BTEX		**42.5**	0.101	mg/kg	11.14.19 23.04		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	11.14.19 23.04	
1,4-Difluorobenzene	540-36-3	92	%	70-130	11.14.19 23.04	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-006	Date Collected:	11.13.19 09.39	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4460**	200	mg/kg	11.14.19 15.14		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.14.19 21.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.14.19 21.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.14.19 21.21	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.14.19 21.21	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.14.19 21.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.14.19 21.21	
o-Terphenyl	84-15-1	104	%	70-135	11.14.19 21.21	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-006	Date Collected:	11.13.19 09.39	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.14.19 16.43	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.14.19 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.14.19 16.43	
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.14.19 16.43	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-007	Date Collected:	11.13.19 10.23	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.5**	9.86	mg/kg	11.14.19 15.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.14.19 21.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.14.19 21.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.14.19 21.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.14.19 21.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.14.19 21.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	11.14.19 21.41	
o-Terphenyl	84-15-1	123	%	70-135	11.14.19 21.41	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-007	Date Collected:	11.13.19 10.23	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	11.14.19 17.04	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	11.14.19 17.04	U	1
Ethylbenzene	100-41-4	**0.00123**	0.000996	mg/kg	11.14.19 17.04		1
m,p-Xylenes	179601-23-1	**0.00654**	0.00199	mg/kg	11.14.19 17.04		1
o-Xylene	95-47-6	**0.00422**	0.000996	mg/kg	11.14.19 17.04		1
Total Xylenes	1330-20-7	**0.0108**	0.000996	mg/kg	11.14.19 17.04		1
Total BTEX		**0.0120**	0.000996	mg/kg	11.14.19 17.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.19 17.04	
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.14.19 17.04	

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LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-008	Date Collected:	11.13.19 10.26	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**68.8**	9.88	mg/kg	11.14.19 15.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.15.19 12.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.15.19 12.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.15.19 12.26	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.15.19 12.26	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.15.19 12.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	11.15.19 12.26	
o-Terphenyl	84-15-1	135	%	70-135	11.15.19 12.26	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-008	Date Collected:	11.13.19 10.26	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.14.19 17.24	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.14.19 17.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	11.14.19 17.24	
1,4-Difluorobenzene	540-36-3	91	%	70-130	11.14.19 17.24	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-009	Date Collected:	11.13.19 10.39	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.0**	9.92	mg/kg	11.14.19 15.44		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 14.00	Basis:	Wet Weight
Seq Number:	3107585				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 22.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 22.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 22.22	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 22.22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 22.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	11.14.19 22.22	
o-Terphenyl	84-15-1	114	%	70-135	11.14.19 22.22	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-009	Date Collected:	11.13.19 10.39	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	11.14.19 17.44	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.14.19 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.14.19 17.44	
1,4-Difluorobenzene	540-36-3	100	%	70-130	11.14.19 17.44	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-010	Date Collected:	11.13.19 10.41	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**338**	9.82	mg/kg	11.14.19 15.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 16.11	Basis:	Wet Weight
Seq Number:	3107605				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.15.19 12.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.15.19 12.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.15.19 12.47	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.15.19 12.47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.15.19 12.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.15.19 12.47	
o-Terphenyl	84-15-1	115	%	70-135	11.15.19 12.47	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-010	Date Collected:	11.13.19 10.41	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.14.19 18.05	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.14.19 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	11.14.19 18.05	
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.14.19 18.05	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-011	Date Collected:	11.13.19 12.43	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2640**	99.8	mg/kg	11.14.19 15.56		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 16.11	Basis:	Wet Weight
Seq Number:	3107605				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**50.8**	49.7	mg/kg	11.15.19 01.03		1
Diesel Range Organics (DRO)	C10C28DRO	**3190**	49.7	mg/kg	11.15.19 01.03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**267**	49.7	mg/kg	11.15.19 01.03		1
Total GRO-DRO	PHC628	**3240**	49.7	mg/kg	11.15.19 01.03		1
Total TPH	PHC635	**3510**	49.7	mg/kg	11.15.19 01.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	11.15.19 01.03	
o-Terphenyl	84-15-1	292	%	70-135	11.15.19 01.03	**

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-011	Date Collected:	11.13.19 12.43	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.14.19 18.25	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.14.19 18.25	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.14.19 18.25	U	1
m,p-Xylenes	179601-23-1	**0.00366**	0.00202	mg/kg	11.14.19 18.25		1
o-Xylene	95-47-6	**0.0130**	0.00101	mg/kg	11.14.19 18.25		1
Total Xylenes	1330-20-7	**0.0167**	0.00101	mg/kg	11.14.19 18.25		1
Total BTEX		**0.0167**	0.00101	mg/kg	11.14.19 18.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.14.19 18.25	
1,4-Difluorobenzene	540-36-3	95	%	70-130	11.14.19 18.25	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-012	Date Collected:	11.13.19 12.46	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 13.00	Basis:	Wet Weight
Seq Number:	3107606				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.1**	9.92	mg/kg	11.14.19 16.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.14.19 16.11	Basis:	Wet Weight
Seq Number:	3107605				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**182**	49.8	mg/kg	11.15.19 01.24		1
Diesel Range Organics (DRO)	C10C28DRO	**3310**	49.8	mg/kg	11.15.19 01.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**285**	49.8	mg/kg	11.15.19 01.24		1
Total GRO-DRO	PHC628	**3490**	49.8	mg/kg	11.15.19 01.24		1
Total TPH	PHC635	**3780**	49.8	mg/kg	11.15.19 01.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	11.15.19 01.24	
o-Terphenyl	84-15-1	109	%	70-135	11.15.19 01.24	

Certificate of Analytical Results 643201

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	11.14.19 11.30
Lab Sample Id:	643201-012	Date Collected:	11.13.19 12.46	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.14.19 12.11	Basis:	Wet Weight
Seq Number:	3107592				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00242**	0.00101	mg/kg	11.14.19 18.46		1
Toluene	108-88-3	**0.00471**	0.00101	mg/kg	11.14.19 18.46		1
Ethylbenzene	100-41-4	**0.0998**	0.00101	mg/kg	11.14.19 18.46		1
m,p-Xylenes	179601-23-1	**0.0732**	0.00201	mg/kg	11.14.19 18.46		1
o-Xylene	95-47-6	**0.0599**	0.00101	mg/kg	11.14.19 18.46		1
Total Xylenes	1330-20-7	**0.133**	0.00101	mg/kg	11.14.19 18.46		1
Total BTEX		**0.240**	0.00101	mg/kg	11.14.19 18.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.14.19 18.46	
1,4-Difluorobenzene	540-36-3	92	%	70-130	11.14.19 18.46	

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 643201

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107606 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690342-1-BLK — LCS Sample Id: 7690342-1-BKS — LCSD Sample Id: 7690342-1-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	249	100	247	99	90-110	1	20	mg/kg	11.14.19 11:37	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107606 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643115-001 — MS Sample Id: 643115-001 S — MSD Sample Id: 643115-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	122	201	324	100	332	105	90-110	2	20	mg/kg	11.14.19 11:54	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107606 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643201-003 — MS Sample Id: 643201-003 S — MSD Sample Id: 643201-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.2	200	259	99	262	101	90-110	1	20	mg/kg	11.14.19 14:51	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107585 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690406-1-BLK — LCS Sample Id: 7690406-1-BKS — LCSD Sample Id: 7690406-1-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	975	98	1040	104	70-135	6	35	mg/kg	11.14.19 13:42	
Diesel Range Organics (DRO)	<50.0	1000	984	98	1040	104	70-135	6	35	mg/kg	11.14.19 13:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		114		121		70-135	%	11.14.19 13:42
o-Terphenyl	106		113		112		70-135	%	11.14.19 13:42

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

QC Summary 643201

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107605 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690422-1-BLK — LCS Sample Id: 7690422-1-BKS — LCSD Sample Id: 7690422-1-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	950	95	966	97	70-135	2	35	mg/kg	11.14.19 23:22	
Diesel Range Organics (DRO)	<50.0	1000	1060	106	1100	110	70-135	4	35	mg/kg	11.14.19 23:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		130		131		70-135	%	11.14.19 23:22
o-Terphenyl	114		128		121		70-135	%	11.14.19 23:22

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107585 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690406-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.14.19 13:21	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107605 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690422-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.14.19 23:02	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107585 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643114-001 — MS Sample Id: 643114-001 S — MSD Sample Id: 643114-001 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	961	96	1040	103	70-135	8	35	mg/kg	11.14.19 15:14	
Diesel Range Organics (DRO)	<50.2	1000	967	97	1070	106	70-135	10	35	mg/kg	11.14.19 15:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		125		70-135	%	11.14.19 15:14
o-Terphenyl	108		119		70-135	%	11.14.19 15:14

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 643201

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107605 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643201-010 — MS Sample Id: 643201-010 S — MSD Sample Id: 643201-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	840	83	945	95	70-135	12	35	mg/kg	11.15.19 00:23	
Diesel Range Organics (DRO)	<50.3	1010	969	96	1080	109	70-135	11	35	mg/kg	11.15.19 00:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		128		70-135	%	11.15.19 00:23
o-Terphenyl	101		115		70-135	%	11.15.19 00:23

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107592 — Matrix: Solid — Date Prep: 11.14.19
MB Sample Id: 7690408-1-BLK — LCS Sample Id: 7690408-1-BKS — LCSD Sample Id: 7690408-1-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	0.120	120	0.117	117	70-130	3	35	mg/kg	11.14.19 13:26	
Toluene	<0.00100	0.100	0.119	119	0.116	116	70-130	3	35	mg/kg	11.14.19 13:26	
Ethylbenzene	<0.00100	0.100	0.121	121	0.117	117	71-129	3	35	mg/kg	11.14.19 13:26	
m,p-Xylenes	<0.00200	0.200	0.241	121	0.232	116	70-135	4	35	mg/kg	11.14.19 13:26	
o-Xylene	<0.00100	0.100	0.122	122	0.117	117	71-133	4	35	mg/kg	11.14.19 13:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		97		70-130	%	11.14.19 13:26
4-Bromofluorobenzene	120		123		123		70-130	%	11.14.19 13:26

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107592 — Matrix: Soil — Date Prep: 11.14.19
Parent Sample Id: 643201-001 — MS Sample Id: 643201-001 S — MSD Sample Id: 643201-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000988	0.0988	0.108	109	0.0909	92	70-130	17	35	mg/kg	11.14.19 14:47	
Toluene	<0.000988	0.0988	0.109	110	0.0919	93	70-130	17	35	mg/kg	11.14.19 14:47	
Ethylbenzene	<0.000988	0.0988	0.105	106	0.0998	101	71-129	5	35	mg/kg	11.14.19 14:47	
m,p-Xylenes	<0.00198	0.198	0.231	117	0.202	102	70-135	13	35	mg/kg	11.14.19 14:47	
o-Xylene	0.000544	0.0988	0.107	108	0.0998	100	71-133	7	35	mg/kg	11.14.19 14:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	11.14.19 14:47
4-Bromofluorobenzene	126		128		70-130	%	11.14.19 14:47

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

Chain of Custody

Work Order No: 643201

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

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

Project Name:	Palmillo St #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.0	Thermometer ID	
Received Intact:	(Yes) No	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	12

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	11/13/19	0856	12'	1	X	X	X
FS04			0900	12'				
SW01			0931	0-12'				
SW02			0934					
SW03			0936					
SW04			0939					
SW05			1023					
SW06			1026					
SW07			1039					
SW08			1041					

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time		Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima	Anna Byers	11/14/19 0910	2	Anna Byers		11/14/19 11:30
3				4			
5				6			

Revised Date101419 Rev. 2019.1

Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 1243201

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name:	Palmillo St # 001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS07	S	11/13/19	1243	0.5'	1	X	X	X
FS08	S	11/13/19	1246	0.5'	1	X	X	X

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers	11/14/19 0910	2 Anna Byers	Courtney	11/14/19 11:30
3			4		
5			6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/14/2019 11:30:00 AM

Work Order #: 643201

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 11/14/2019

Checklist reviewed by: Jessica Kramer Date: 11/15/2019

Analytical Report 643024

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo St #001H Flowline

012919058

14-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)

14-NOV-19

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

Reference: XENCO Report No(s): **643024**
Palmillo St #001H 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) 643024. 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. 643024 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02	S	11-12-19 14:43	12 ft	643024-001
FS03	S	11-12-19 14:25	12 ft	643024-002
FS05	S	11-12-19 14:47	12 ft	643024-003
FS06	S	11-12-19 14:50	12 ft	643024-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Palmillo St #001H Flowline

Project ID: *012919058*
Work Order Number(s): *643024*

Report Date: *14-NOV-19*
Date Received: *11/13/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107440 BTEX by EPA 8021B

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

Certificate of Analysis Summary 643024

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Nov-13-19 10:44 am
Report Date: 14-NOV-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	643024-001		643024-002		643024-003		643024-004					
	Field Id:	FS02		FS03		FS05		FS06					
	Depth:	12- ft		12- ft		12- ft		12- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Nov-12-19 14:43		Nov-12-19 14:25		Nov-12-19 14:47		Nov-12-19 14:50					
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Nov-13-19 15:00		Nov-13-19 15:00		Nov-13-19 15:00		Nov-13-19 15:00					
	Analyzed:	Nov-14-19 05:52		Nov-14-19 06:12		Nov-14-19 06:32		Nov-14-19 06:52					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199				
Toluene		<0.00202	0.00202	0.00235	0.00202	<0.00200	0.00200	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199				
m,p-Xylenes		<0.00404	0.00404	0.00666	0.00403	0.0109	0.00399	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	0.00666	0.00202	0.0109	0.00200	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	0.00901	0.00202	0.0109	0.00200	<0.00199	0.00199				
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Nov-13-19 16:45		Nov-13-19 16:45		Nov-13-19 16:45		Nov-13-19 16:45					
	Analyzed:	Nov-13-19 22:47		Nov-13-19 23:07		Nov-13-19 23:14		Nov-13-19 23:20					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		95.3	5.00	1430	5.02	38.5	4.98	24.4	4.95				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Nov-13-19 16:00		Nov-13-19 16:00		Nov-13-19 16:00		Nov-13-19 16:00					
	Analyzed:	Nov-14-19 04:34		Nov-14-19 04:55		Nov-14-19 05:15		Nov-14-19 05:36					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0				
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0				
Total GRO-DRO		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0				
Total TPH		<49.9	49.9	<50.0	50.0	<49.9	49.9	<50.0	50.0				

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-001	Date Collected:	11.12.19 14.43	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.13.19 16.45	Basis:	Wet Weight
Seq Number:	3107409			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**95.3**	5.00	mg/kg	11.13.19 22.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.13.19 16.00	Basis:	Wet Weight
Seq Number:	3107399			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.14.19 04.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.14.19 04.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.14.19 04.34	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.14.19 04.34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.14.19 04.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.14.19 04.34	
o-Terphenyl	84-15-1	89	%	70-135	11.14.19 04.34	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-001	Date Collected:	11.12.19 14.43	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.13.19 15.00	Basis:	Wet Weight
Seq Number:	3107440			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	11.14.19 05.52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.14.19 05.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.14.19 05.52	
4-Bromofluorobenzene	460-00-4	99	%	70-130	11.14.19 05.52	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-002	Date Collected:	11.12.19 14.25	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.13.19 16.45	Basis:	Wet Weight
Seq Number:	3107409			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1430**	5.02	mg/kg	11.13.19 23.07		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.13.19 16.00	Basis:	Wet Weight
Seq Number:	3107399			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 04.55	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 04.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	11.14.19 04.55	
o-Terphenyl	84-15-1	88	%	70-135	11.14.19 04.55	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-002	Date Collected:	11.12.19 14.25	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.13.19 15.00	Basis:	Wet Weight
Seq Number:	3107440			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.14.19 06.12	U	1
Toluene	108-88-3	**0.00235**	0.00202	mg/kg	11.14.19 06.12		1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.14.19 06.12	U	1
m,p-Xylenes	179601-23-1	**0.00666**	0.00403	mg/kg	11.14.19 06.12		1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.14.19 06.12	U	1
Total Xylenes	1330-20-7	**0.00666**	0.00202	mg/kg	11.14.19 06.12		1
Total BTEX		**0.00901**	0.00202	mg/kg	11.14.19 06.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.14.19 06.12	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.14.19 06.12	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-003	Date Collected:	11.12.19 14.47	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.13.19 16.45	Basis:	Wet Weight
Seq Number:	3107409			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.5**	4.98	mg/kg	11.13.19 23.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.13.19 16.00	Basis:	Wet Weight
Seq Number:	3107399			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.14.19 05.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.14.19 05.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.14.19 05.15	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.14.19 05.15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.14.19 05.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.14.19 05.15	
o-Terphenyl	84-15-1	92	%	70-135	11.14.19 05.15	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-003	Date Collected:	11.12.19 14.47	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.13.19 15.00	Basis:	Wet Weight
Seq Number:	3107440			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.14.19 06.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.14.19 06.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.14.19 06.32	U	1
m,p-Xylenes	179601-23-1	**0.0109**	0.00399	mg/kg	11.14.19 06.32		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.14.19 06.32	U	1
Total Xylenes	1330-20-7	**0.0109**	0.00200	mg/kg	11.14.19 06.32		1
Total BTEX		**0.0109**	0.00200	mg/kg	11.14.19 06.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.14.19 06.32	
1,4-Difluorobenzene	540-36-3	95	%	70-130	11.14.19 06.32	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-004	Date Collected:	11.12.19 14.50	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	11.13.19 16.45	Basis:	Wet Weight
Seq Number:	3107409			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.4**	4.95	mg/kg	11.13.19 23.20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	11.13.19 16.00	Basis:	Wet Weight
Seq Number:	3107399			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.14.19 05.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.14.19 05.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.14.19 05.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.14.19 05.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.14.19 05.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.14.19 05.36	
o-Terphenyl	84-15-1	92	%	70-135	11.14.19 05.36	

Certificate of Analytical Results 643024

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	11.13.19 10.44
Lab Sample Id:	643024-004	Date Collected:	11.12.19 14.50	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	11.13.19 15.00	Basis:	Wet Weight
Seq Number:	3107440			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.14.19 06.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.14.19 06.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	11.14.19 06.52	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.14.19 06.52	

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 643024

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3107409 Matrix: Solid Date Prep: 11.13.19
MB Sample Id: 7690276-1-BLK LCS Sample Id: 7690276-1-BKS LCSD Sample Id: 7690276-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	245	98	246	98	90-110	0	20	mg/kg	11.13.19 22:34	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3107409 Matrix: Soil Date Prep: 11.13.19
Parent Sample Id: 643024-001 MS Sample Id: 643024-001 S MSD Sample Id: 643024-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	95.3	400	518	106	509	103	90-110	2	20	mg/kg	11.13.19 22:54	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3107399 Matrix: Solid Date Prep: 11.13.19
MB Sample Id: 7690274-1-BLK LCS Sample Id: 7690274-1-BKS LCSD Sample Id: 7690274-1-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	1150	115	1190	119	70-135	3	20	mg/kg	11.14.19 02:48	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	1150	115	70-135	4	20	mg/kg	11.14.19 02:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		116		121		70-135	%	11.14.19 02:48
o-Terphenyl	105		104		109		70-135	%	11.14.19 02:48

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3107399 Matrix: Solid Date Prep: 11.13.19
MB Sample Id: 7690274-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.14.19 02:27	

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

QC Summary 643024

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107399 — Matrix: Soil — Date Prep: 11.13.19
Parent Sample Id: 643015-001 — MS Sample Id: 643015-001 S — MSD Sample Id: 643015-001 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	1180	118	1200	120	70-135	2	20	mg/kg	11.14.19 03:51	
Diesel Range Organics (DRO)	21.2	997	1190	117	1170	115	70-135	2	20	mg/kg	11.14.19 03:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		128		70-135	%	11.14.19 03:51
o-Terphenyl	112		113		70-135	%	11.14.19 03:51

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107440 — Matrix: Solid — Date Prep: 11.13.19
MB Sample Id: 7690267-1-BLK — LCS Sample Id: 7690267-1-BKS — LCSD Sample Id: 7690267-1-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	0.0974	97	0.106	106	70-130	8	35	mg/kg	11.13.19 22:51	
Toluene	<0.00200	0.100	0.103	103	0.111	111	70-130	7	35	mg/kg	11.13.19 22:51	
Ethylbenzene	<0.00200	0.100	0.104	104	0.112	112	70-130	7	35	mg/kg	11.13.19 22:51	
m,p-Xylenes	<0.00400	0.200	0.182	91	0.198	99	70-130	8	35	mg/kg	11.13.19 22:51	
o-Xylene	<0.00200	0.100	0.104	104	0.113	113	70-130	8	35	mg/kg	11.13.19 22:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		95		101		70-130	%	11.13.19 22:51
4-Bromofluorobenzene	88		98		109		70-130	%	11.13.19 22:51

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107440 — Matrix: Soil — Date Prep: 11.13.19
Parent Sample Id: 642593-001 — MS Sample Id: 642593-001 S — MSD Sample Id: 642593-001 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	0.0917	92	0.0971	97	70-130	6	35	mg/kg	11.13.19 23:32	
Toluene	<0.00200	0.100	0.0995	100	0.101	101	70-130	1	35	mg/kg	11.13.19 23:32	
Ethylbenzene	<0.00200	0.100	0.0939	94	0.101	101	70-130	7	35	mg/kg	11.13.19 23:32	
m,p-Xylenes	<0.00401	0.200	0.172	86	0.178	89	70-130	3	35	mg/kg	11.13.19 23:32	
o-Xylene	<0.00200	0.100	0.0966	97	0.0995	100	70-130	3	35	mg/kg	11.13.19 23:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		94		70-130	%	11.13.19 23:32
4-Bromofluorobenzene	105		106		70-130	%	11.13.19 23:32

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: 643024

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

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

Project Name:	Palmillo St #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	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:	-0.2
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)
FS02	S	11/12/19	1453	12'	1	X	X	X
FS03	S	11/12/19	1425	12'	1	X	X	X
FS05	S	11/12/19	1447	12'	1	X	X	X
FS06	S	11/12/19	1450	12'	1	X	X	X

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		Anna Byers	11/13/19 0945	2 Anna Byers		11/13/19 1044
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Inter-Office Shipment

IOS Number **52148**

Date/Time: 11/13/19 12:23
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
643024-001	S	FS02	11/12/19 14:43	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	
643024-001	S	FS02	11/12/19 14:43	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643024-001	S	FS02	11/12/19 14:43	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643024-002	S	FS03	11/12/19 14:25	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643024-002	S	FS03	11/12/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	
643024-002	S	FS03	11/12/19 14:25	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643024-003	S	FS05	11/12/19 14:47	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643024-003	S	FS05	11/12/19 14:47	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	
643024-003	S	FS05	11/12/19 14:47	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643024-004	S	FS06	11/12/19 14:50	SW8021B	BTEX by EPA 8021B	11/14/19	11/26/19	JKR	BZ BZME EBZ XYLENES	
643024-004	S	FS06	11/12/19 14:50	E300_CL	Chloride by EPA 300	11/14/19	05/10/20	JKR	CL	
643024-004	S	FS06	11/12/19 14:50	SW8015MOD_NM	TPH by SW8015 Mod	11/14/19	11/26/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 11/13/2019

Received By: Brianna Teel

Date Received: 11/13/2019 16:00

Cooler Temperature: 0.6

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 52148

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

Sent By: Elizabeth McClellan **Date Sent:** 11/13/2019 12:23 PM

Received By: Brianna Teel **Date Received:** 11/13/2019 04:00 PM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 11/13/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/13/2019 10:44:00 AM

Work Order #: 643024

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)?	**Yes**	Subbed to 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: 11/13/2019

Checklist reviewed by: Jessica Kramer Date: 11/14/2019

Jessica Kramer

Analytical Report 620217

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Palmillo State #1

12-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

12-APR-19

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

Reference: XENCO Report No(s): **620217**
Palmillo State #1
Project Address: ---

Adrian Baker:

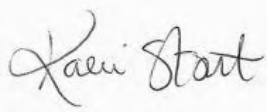
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620217. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory 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. 620217 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,



Kalei Stout
Midland Laboratory Director

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

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

Sample Cross Reference 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04-02-19 16:00	.5	620217-001
SS02	S	04-02-19 16:00	.5	620217-002
SS03	S	04-02-19 16:20	.5	620217-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Palmillo State #1

Project ID: ---
Work Order Number(s): *620217*

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

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3084908 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 620217-003.

Batch: LBA-3085235 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3085314 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 620217

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo State #1

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Fri Apr-05-19 11:11 am
Report Date: 12-APR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	620217-001		620217-002		620217-003				
	Field Id:	SS01		SS02		SS03				
	Depth:	.5-		.5-		.5-				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Apr-02-19 16:00		Apr-02-19 16:00		Apr-02-19 16:20				
BTEX by EPA 8021B	***Extracted:***	Apr-10-19 14:30		Apr-10-19 12:00		Apr-10-19 12:00				
	Analyzed:	Apr-11-19 01:20		Apr-10-19 22:52		Apr-10-19 23:11				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		0.397	0.397	<2.00	2.00	0.936	0.398			
Toluene		6.27	0.397	18.3	2.00	10.3	0.398			
Ethylbenzene		4.60	0.397	10.5	2.00	4.37	0.398			
m,p-Xylenes		23.1	0.794	76.8	4.01	28.1	0.795			
o-Xylene		7.94	0.397	25.8	2.00	9.10	0.398			
Total Xylenes		31.0	0.397	103	2.00	37.2	0.398			
Total BTEX		42.3	0.397	131	2.00	52.8	0.398			
Inorganic Anions by EPA 300	***Extracted:***	Apr-10-19 13:40		Apr-10-19 13:40		Apr-10-19 13:40				
	Analyzed:	Apr-11-19 09:36		Apr-11-19 09:43		Apr-11-19 10:04				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		7150	25.0	1060	4.98	6130	49.5			
TPH by SW8015 Mod	***Extracted:***	Apr-06-19 14:00		Apr-06-19 14:00		Apr-06-19 14:00				
	Analyzed:	Apr-07-19 10:13		Apr-07-19 04:42		Apr-07-19 10:33				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		2630	74.9	8420	74.9	2600	75.0			
Diesel Range Organics (DRO)		7240	74.9	21400	74.9	5160	75.0			
Motor Oil Range Hydrocarbons (MRO)		658	74.9	1380	74.9	486	75.0			
Total TPH		10500	74.9	31200	74.9	8250	75.0			
Total GRO-DRO		9870	74.9	29800	74.9	7760	75.0			

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-001	Date Collected:	04.02.19 16.00	Sample Depth:	.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 13.40	Basis:	Wet Weight
Seq Number:	3085351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7150**	25.0	mg/kg	04.11.19 09.36		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.06.19 14.00	Basis:	Wet Weight
Seq Number:	3084908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2630**	74.9	mg/kg	04.07.19 10.13		5
Diesel Range Organics (DRO)	C10C28DRO	**7240**	74.9	mg/kg	04.07.19 10.13		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**658**	74.9	mg/kg	04.07.19 10.13		5
Total TPH	PHC635	**10500**	74.9	mg/kg	04.07.19 10.13		5
Total GRO-DRO	PHC628	**9870**	74.9	mg/kg	04.07.19 10.13		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	04.07.19 10.13	
o-Terphenyl	84-15-1	82	%	70-135	04.07.19 10.13	

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-001	Date Collected:	04.02.19 16.00	Sample Depth:	.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 14.30	Basis:	Wet Weight
Seq Number:	3085314				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.397**	0.397	mg/kg	04.11.19 01.20		200
Toluene	108-88-3	**6.27**	0.397	mg/kg	04.11.19 01.20		200
Ethylbenzene	100-41-4	**4.60**	0.397	mg/kg	04.11.19 01.20		200
m,p-Xylenes	179601-23-1	**23.1**	0.794	mg/kg	04.11.19 01.20		200
o-Xylene	95-47-6	**7.94**	0.397	mg/kg	04.11.19 01.20		200
Total Xylenes	1330-20-7	**31.0**	0.397	mg/kg	04.11.19 01.20		200
Total BTEX		**42.3**	0.397	mg/kg	04.11.19 01.20		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.11.19 01.20	
4-Bromofluorobenzene	460-00-4	130	%	70-130	04.11.19 01.20	

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-002	Date Collected:	04.02.19 16.00	Sample Depth:	.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 13.40	Basis:	Wet Weight
Seq Number:	3085351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1060**	4.98	mg/kg	04.11.19 09.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.06.19 14.00	Basis:	Wet Weight
Seq Number:	3084908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**8420**	74.9	mg/kg	04.07.19 04.42		5
Diesel Range Organics (DRO)	C10C28DRO	**21400**	74.9	mg/kg	04.07.19 04.42		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1380**	74.9	mg/kg	04.07.19 04.42		5
Total TPH	PHC635	**31200**	74.9	mg/kg	04.07.19 04.42		5
Total GRO-DRO	PHC628	**29800**	74.9	mg/kg	04.07.19 04.42		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.07.19 04.42	
o-Terphenyl	84-15-1	111	%	70-135	04.07.19 04.42	

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-002	Date Collected:	04.02.19 16.00	Sample Depth:	.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<2.00	2.00	mg/kg	04.10.19 22.52	U	1000
Toluene	108-88-3	**18.3**	2.00	mg/kg	04.10.19 22.52		1000
Ethylbenzene	100-41-4	**10.5**	2.00	mg/kg	04.10.19 22.52		1000
m,p-Xylenes	179601-23-1	**76.8**	4.01	mg/kg	04.10.19 22.52		1000
o-Xylene	95-47-6	**25.8**	2.00	mg/kg	04.10.19 22.52		1000
Total Xylenes	1330-20-7	**103**	2.00	mg/kg	04.10.19 22.52		1000
Total BTEX		**131**	2.00	mg/kg	04.10.19 22.52		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.10.19 22.52	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.10.19 22.52	

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-003	Date Collected:	04.02.19 16.20	Sample Depth:	.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	04.10.19 13.40	Basis:	Wet Weight
Seq Number:	3085351				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6130**	49.5	mg/kg	04.11.19 10.04		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.06.19 14.00	Basis:	Wet Weight
Seq Number:	3084908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2600**	75.0	mg/kg	04.07.19 10.33		5
Diesel Range Organics (DRO)	C10C28DRO	**5160**	75.0	mg/kg	04.07.19 10.33		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**486**	75.0	mg/kg	04.07.19 10.33		5
Total TPH	PHC635	**8250**	75.0	mg/kg	04.07.19 10.33		5
Total GRO-DRO	PHC628	**7760**	75.0	mg/kg	04.07.19 10.33		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	04.07.19 10.33	
o-Terphenyl	84-15-1	165	%	70-135	04.07.19 10.33	**

Certificate of Analytical Results 620217

LT Environmental, Inc., Arvada, CO

Palmillo State #1

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.05.19 11.11
Lab Sample Id:	620217-003	Date Collected:	04.02.19 16.20	Sample Depth:	.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.10.19 12.00	Basis:	Wet Weight
Seq Number:	3085235				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.936**	0.398	mg/kg	04.10.19 23.11		200
Toluene	108-88-3	**10.3**	0.398	mg/kg	04.10.19 23.11		200
Ethylbenzene	100-41-4	**4.37**	0.398	mg/kg	04.10.19 23.11		200
m,p-Xylenes	179601-23-1	**28.1**	0.795	mg/kg	04.10.19 23.11		200
o-Xylene	95-47-6	**9.10**	0.398	mg/kg	04.10.19 23.11		200
Total Xylenes	1330-20-7	**37.2**	0.398	mg/kg	04.10.19 23.11		200
Total BTEX		**52.8**	0.398	mg/kg	04.10.19 23.11		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.10.19 23.11	
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.10.19 23.11	

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 620217

LT Environmental, Inc.

Palmillo State #1

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085351 — Matrix: Solid — Date Prep: 04.10.19
MB Sample Id: 7675457-1-BLK — LCS Sample Id: 7675457-1-BKS — LCSD Sample Id: 7675457-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	266	106	258	103	90-110	3	20	mg/kg	04.11.19 07:27	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085351 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620026-005 — MS Sample Id: 620026-005 S — MSD Sample Id: 620026-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.35	250	243	95	244	96	90-110	0	20	mg/kg	04.11.19 07:47	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3085351 — Matrix: Soil — Date Prep: 04.10.19
Parent Sample Id: 620223-003 — MS Sample Id: 620223-003 S — MSD Sample Id: 620223-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	168	249	405	95	456	116	90-110	12	20	mg/kg	04.11.19 09:23	X

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3084908 — Matrix: Solid — Date Prep: 04.06.19
MB Sample Id: 7675255-1-BLK — LCS Sample Id: 7675255-1-BKS — LCSD Sample Id: 7675255-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1030	103	1000	100	70-135	3	20	mg/kg	04.07.19 00:47	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1080	108	70-135	4	20	mg/kg	04.07.19 00:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		128		122		70-135	%	04.07.19 00:47
o-Terphenyl	98		109		103		70-135	%	04.07.19 00:47

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

QC Summary 620217

LT Environmental, Inc.

Palmillo State #1

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3084908 | Matrix: Soil | Date Prep: 04.06.19
Parent Sample Id: 620072-001 | MS Sample Id: 620072-001 S | MSD Sample Id: 620072-001 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)	<8.00	1000	1060	106	959	96	70-135	10	20	mg/kg	04.07.19 01:46	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1050	105	70-135	12	20	mg/kg	04.07.19 01:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		116		70-135	%	04.07.19 01:46
o-Terphenyl	103		95		70-135	%	04.07.19 01:46

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3085235 | Matrix: Solid | Date Prep: 04.10.19
MB Sample Id: 7675486-1-BLK | LCS Sample Id: 7675486-1-BKS | LCSD Sample Id: 7675486-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0984	99	0.106	107	70-130	7	35	mg/kg	04.10.19 13:46	
Toluene	<0.000454	0.0996	0.100	100	0.107	108	70-130	7	35	mg/kg	04.10.19 13:46	
Ethylbenzene	<0.000563	0.0996	0.0940	94	0.100	101	70-130	6	35	mg/kg	04.10.19 13:46	
m,p-Xylenes	<0.00101	0.199	0.187	94	0.200	101	70-130	7	35	mg/kg	04.10.19 13:46	
o-Xylene	<0.000343	0.0996	0.0935	94	0.101	102	70-130	8	35	mg/kg	04.10.19 13:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		100		70-130	%	04.10.19 13:46
4-Bromofluorobenzene	88		95		99		70-130	%	04.10.19 13:46

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3085314 | Matrix: Solid | Date Prep: 04.10.19
MB Sample Id: 7675535-1-BLK | LCS Sample Id: 7675535-1-BKS | LCSD Sample Id: 7675535-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0999	101	0.101	101	70-130	1	35	mg/kg	04.10.19 16:25	
Toluene	<0.00198	0.0992	0.0939	95	0.0959	96	70-130	2	35	mg/kg	04.10.19 16:25	
Ethylbenzene	<0.00198	0.0992	0.0960	97	0.0986	99	70-130	3	35	mg/kg	04.10.19 16:25	
m,p-Xylenes	<0.00101	0.198	0.192	97	0.197	99	70-130	3	35	mg/kg	04.10.19 16:25	
o-Xylene	<0.00198	0.0992	0.0971	98	0.0992	99	70-130	2	35	mg/kg	04.10.19 16:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		100		70-130	%	04.10.19 16:25
4-Bromofluorobenzene	100		102		100		70-130	%	04.10.19 16:25

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

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

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

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

Final 1.000

QC Summary 620217

LT Environmental, Inc.

Palmillo State #1

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

Seq Number: 3085235 Matrix: Soil Date Prep: 04.10.19

Parent Sample Id: 620613-001 MS Sample Id: 620613-001 S MSD Sample Id: 620613-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0932	93	0.0782	79	70-130	18	35	mg/kg	04.10.19 14:26	
Toluene	<0.000457	0.100	0.0926	93	0.0787	79	70-130	16	35	mg/kg	04.10.19 14:26	
Ethylbenzene	<0.000566	0.100	0.0849	85	0.0718	72	70-130	17	35	mg/kg	04.10.19 14:26	
m,p-Xylenes	<0.00102	0.200	0.169	85	0.144	72	70-130	16	35	mg/kg	04.10.19 14:26	
o-Xylene	<0.000345	0.100	0.0849	85	0.0728	73	70-130	15	35	mg/kg	04.10.19 14:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		97		70-130	%	04.10.19 14:26
4-Bromofluorobenzene	99		98		70-130	%	04.10.19 14:26

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

Seq Number: 3085314 Matrix: Soil Date Prep: 04.10.19

Parent Sample Id: 620065-001 MS Sample Id: 620065-001 S MSD Sample Id: 620065-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0945	95	0.0869	86	70-130	8	35	mg/kg	04.10.19 17:03	
Toluene	0.00105	0.100	0.0887	88	0.0856	84	70-130	4	35	mg/kg	04.10.19 17:03	
Ethylbenzene	0.000614	0.100	0.0889	88	0.0861	85	70-130	3	35	mg/kg	04.10.19 17:03	
m,p-Xylenes	0.00170	0.201	0.177	87	0.174	85	70-130	2	35	mg/kg	04.10.19 17:03	
o-Xylene	0.000694	0.100	0.0904	90	0.0890	87	70-130	2	35	mg/kg	04.10.19 17:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		97		70-130	%	04.10.19 17:03
4-Bromofluorobenzene	104		109		70-130	%	04.10.19 17:03

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 620217

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:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	Ggreen@LTenv.com

Work Order Comments

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

Project Name:	Palmillo State #1	Turn Around	
Project Number:		Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.5/0.4	Thermometer ID		
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.1	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	4/2/19	1600	.5	1	X	X	X
SS02	S	↓	1600	↓	1	↓	↓	↓
SS03	S	↓	1620	↓	1	↓	↓	↓

Work Order Notes

32.6902061
-104.1248496

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/3/19 1645	2		4/5/19
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

After printing this label:

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/05/2019 11:11:00 AM

Work Order #: 620217

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 04/05/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 04/07/2019

Kalei Stout

Analytical Report 643339

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo St #001H Flowline

012919058

27-FEB-20

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)

27-FEB-20

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

Reference: XENCO Report No(s): **643339**
Palmillo St #001H 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) 643339. 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. 643339 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW09	S	11-14-19 14:13	0 - 6 ft	643339-001
SW11	S	11-14-19 15:03	0 - 6 ft	643339-002
SW12	S	11-14-19 15:07	0 - 6 ft	643339-003
FW07A	S	11-14-19 14:50	6 ft	643339-004
FW08A	S	11-14-19 15:09	6 ft	643339-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Palmillo St #001H Flowline

Project ID: *012919058*
Work Order Number(s): *643339*

Report Date: *27-FEB-20*
Date Received: *11/15/2019*

Sample receipt non conformances and comments:

Revised report issued to correct transcription error in client sample names from the COC. JB 2/21/20

V1.002 - Revision (client email) Corrected sample names as follows below JK 02/27/20
SW02A --> SW09
SW03A --> SW11
SW04A --> SW12

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3107736 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 643339-002.

Batch: LBA-3107747 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 643339

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo St #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Nov-15-19 10:10 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	643339-001		643339-002		643339-003		643339-004		643339-005	
	Field Id:	SW09		SW11		SW12		FW07A		FW08A	
	Depth:	0-6 ft		0-6 ft		0-6 ft		6- ft		6- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-14-19 14:13		Nov-14-19 15:03		Nov-14-19 15:07		Nov-14-19 14:50		Nov-14-19 15:09	
BTEX by EPA 8021B	***Extracted:***	Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11		Nov-15-19 13:11	
	Analyzed:	Nov-15-19 17:51		Nov-15-19 18:11		Nov-15-19 19:26		Nov-15-19 18:32		Nov-15-19 20:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00141	0.000992	<0.00100	0.00100	<0.00101	0.00101	0.00177	0.00101	<0.00101	0.00101
Toluene		0.213	0.000992	0.00193	0.00100	<0.00101	0.00101	0.234	0.00101	<0.00101	0.00101
Ethylbenzene		0.201	0.000992	0.00200	0.00100	<0.00101	0.00101	0.147	0.00101	<0.00101	0.00101
m,p-Xylenes		0.787	0.00198	0.00940	0.00200	<0.00201	0.00201	0.732	0.00202	0.0156	0.00202
o-Xylene		0.377	0.000992	0.0107	0.00100	<0.00101	0.00101	0.399	0.00101	<0.00101	0.00101
Total Xylenes		1.16	0.000992	0.0201	0.00100	<0.00101	0.00101	1.13	0.00101	0.0156	0.00101
Total BTEX		1.58	0.000992	0.0240	0.00100	<0.00101	0.00101	1.51	0.00101	0.0156	0.00101
Chloride by EPA 300	***Extracted:***	Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00		Nov-15-19 15:00	
	Analyzed:	Nov-15-19 16:23		Nov-15-19 16:42		Nov-15-19 16:48		Nov-15-19 16:54		Nov-15-19 17:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		554	9.94	790	50.1	3750	50.4	774	101	3610	101
TPH by SW8015 Mod	***Extracted:***	Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00		Nov-15-19 17:00	
	Analyzed:	Nov-15-19 22:43		Nov-15-19 23:04		Nov-15-19 23:24		Nov-15-19 23:44		Nov-16-19 00:04	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		1260	50.1	<50.2	50.2	<50.0	50.0	769	50.2	<50.1	50.1
Diesel Range Organics (DRO)		4330	50.1	276	50.2	74.7	50.0	2960	50.2	94.9	50.1
Motor Oil Range Hydrocarbons (MRO)		256	50.1	52.1	50.2	<50.0	50.0	176	50.2	<50.1	50.1
Total GRO-DRO		5590	50.1	276	50.2	74.7	50.0	3730	50.2	94.9	50.1
Total TPH		5850	50.1	328	50.2	74.7	50.0	3910	50.2	94.9	50.1

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-001	Date Collected:	11.14.19 14.13	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**554**	9.94	mg/kg	11.15.19 16.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1260**	50.1	mg/kg	11.15.19 22.43		1
Diesel Range Organics (DRO)	C10C28DRO	**4330**	50.1	mg/kg	11.15.19 22.43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**256**	50.1	mg/kg	11.15.19 22.43		1
Total GRO-DRO	PHC628	**5590**	50.1	mg/kg	11.15.19 22.43		1
Total TPH	PHC635	**5850**	50.1	mg/kg	11.15.19 22.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.15.19 22.43	
o-Terphenyl	84-15-1	114	%	70-135	11.15.19 22.43	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-001	Date Collected:	11.14.19 14.13	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00141**	0.000992	mg/kg	11.15.19 17.51		1
Toluene	108-88-3	**0.213**	0.000992	mg/kg	11.15.19 17.51		1
Ethylbenzene	100-41-4	**0.201**	0.000992	mg/kg	11.15.19 17.51		1
m,p-Xylenes	179601-23-1	**0.787**	0.00198	mg/kg	11.15.19 17.51		1
o-Xylene	95-47-6	**0.377**	0.000992	mg/kg	11.15.19 17.51		1
Total Xylenes	1330-20-7	**1.16**	0.000992	mg/kg	11.15.19 17.51		1
Total BTEX		**1.58**	0.000992	mg/kg	11.15.19 17.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	11.15.19 17.51	
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.15.19 17.51	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-002	Date Collected:	11.14.19 15.03	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**790**	50.1	mg/kg	11.15.19 16.42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.15.19 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**276**	50.2	mg/kg	11.15.19 23.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**52.1**	50.2	mg/kg	11.15.19 23.04		1
Total GRO-DRO	PHC628	**276**	50.2	mg/kg	11.15.19 23.04		1
Total TPH	PHC635	**328**	50.2	mg/kg	11.15.19 23.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	11.15.19 23.04	
o-Terphenyl	84-15-1	141	%	70-135	11.15.19 23.04	**

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW11**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-002	Date Collected:	11.14.19 15.03	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.15.19 18.11	U	1
Toluene	108-88-3	**0.00193**	0.00100	mg/kg	11.15.19 18.11		1
Ethylbenzene	100-41-4	**0.00200**	0.00100	mg/kg	11.15.19 18.11		1
m,p-Xylenes	179601-23-1	**0.00940**	0.00200	mg/kg	11.15.19 18.11		1
o-Xylene	95-47-6	**0.0107**	0.00100	mg/kg	11.15.19 18.11		1
Total Xylenes	1330-20-7	**0.0201**	0.00100	mg/kg	11.15.19 18.11		1
Total BTEX		**0.0240**	0.00100	mg/kg	11.15.19 18.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	11.15.19 18.11	
4-Bromofluorobenzene	460-00-4	94	%	70-130	11.15.19 18.11	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-003	Date Collected:	11.14.19 15.07	Sample Depth:	0 - 6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3750**	50.4	mg/kg	11.15.19 16.48		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.15.19 23.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	**74.7**	50.0	mg/kg	11.15.19 23.24		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.15.19 23.24	U	1
Total GRO-DRO	PHC628	**74.7**	50.0	mg/kg	11.15.19 23.24		1
Total TPH	PHC635	**74.7**	50.0	mg/kg	11.15.19 23.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	11.15.19 23.24	
o-Terphenyl	84-15-1	134	%	70-135	11.15.19 23.24	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**SW12**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-003	Date Collected:	11.14.19 15.07	Sample Depth:	0 - 6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.15.19 19.26	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1
Total BTEX		<0.00101	0.00101	mg/kg	11.15.19 19.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	11.15.19 19.26	
1,4-Difluorobenzene	540-36-3	97	%	70-130	11.15.19 19.26	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FW07A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-004	Date Collected:	11.14.19 14.50	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**774**	101	mg/kg	11.15.19 16.54		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**769**	50.2	mg/kg	11.15.19 23.44		1
Diesel Range Organics (DRO)	C10C28DRO	**2960**	50.2	mg/kg	11.15.19 23.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**176**	50.2	mg/kg	11.15.19 23.44		1
Total GRO-DRO	PHC628	**3730**	50.2	mg/kg	11.15.19 23.44		1
Total TPH	PHC635	**3910**	50.2	mg/kg	11.15.19 23.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	133	%	70-135	11.15.19 23.44	
o-Terphenyl	84-15-1	133	%	70-135	11.15.19 23.44	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FW07A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-004	Date Collected:	11.14.19 14.50	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00177**	0.00101	mg/kg	11.15.19 18.32		1
Toluene	108-88-3	**0.234**	0.00101	mg/kg	11.15.19 18.32		1
Ethylbenzene	100-41-4	**0.147**	0.00101	mg/kg	11.15.19 18.32		1
m,p-Xylenes	179601-23-1	**0.732**	0.00202	mg/kg	11.15.19 18.32		1
o-Xylene	95-47-6	**0.399**	0.00101	mg/kg	11.15.19 18.32		1
Total Xylenes	1330-20-7	**1.13**	0.00101	mg/kg	11.15.19 18.32		1
Total BTEX		**1.51**	0.00101	mg/kg	11.15.19 18.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	87	%	70-130	11.15.19 18.32	
4-Bromofluorobenzene	460-00-4	127	%	70-130	11.15.19 18.32	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FW08A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-005	Date Collected:	11.14.19 15.09	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 15.00	Basis:	Wet Weight
Seq Number:	3107753				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3610**	101	mg/kg	11.15.19 17.01		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.15.19 17.00	Basis:	Wet Weight
Seq Number:	3107736				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.16.19 00.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**94.9**	50.1	mg/kg	11.16.19 00.04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.16.19 00.04	U	1
Total GRO-DRO	PHC628	**94.9**	50.1	mg/kg	11.16.19 00.04		1
Total TPH	PHC635	**94.9**	50.1	mg/kg	11.16.19 00.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	11.16.19 00.04	
o-Terphenyl	84-15-1	113	%	70-135	11.16.19 00.04	

Certificate of Analytical Results 643339

LT Environmental, Inc., Arvada, CO

Palmillo St #001H Flowline

Sample Id:	**FW08A**	Matrix:	Soil	Date Received:	11.15.19 10.10
Lab Sample Id:	643339-005	Date Collected:	11.14.19 15.09	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.15.19 13.11	Basis:	Wet Weight
Seq Number:	3107747				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	11.15.19 20.49	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	11.15.19 20.49	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	11.15.19 20.49	U	1
m,p-Xylenes	179601-23-1	**0.0156**	0.00202	mg/kg	11.15.19 20.49		1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	11.15.19 20.49	U	1
Total Xylenes	1330-20-7	**0.0156**	0.00101	mg/kg	11.15.19 20.49		1
Total BTEX		**0.0156**	0.00101	mg/kg	11.15.19 20.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	11.15.19 20.49	
4-Bromofluorobenzene	460-00-4	123	%	70-130	11.15.19 20.49	

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 643339

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690447-1-BLK — LCS Sample Id: 7690447-1-BKS — LCSD Sample Id: 7690447-1-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	247	99	247	99	90-110	0	20	mg/kg	11.15.19 16:10	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643336-006 — MS Sample Id: 643336-006 S — MSD Sample Id: 643336-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.6	201	218	98	226	103	90-110	4	20	mg/kg	11.15.19 17:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3107753 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643339-001 — MS Sample Id: 643339-001 S — MSD Sample Id: 643339-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	554	200	751	99	762	103	90-110	1	20	mg/kg	11.15.19 16:29	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690492-1-BLK — LCS Sample Id: 7690492-1-BKS — LCSD Sample Id: 7690492-1-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	1030	103	985	99	70-135	4	35	mg/kg	11.15.19 17:37	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1000	100	70-135	5	35	mg/kg	11.15.19 17:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		123		116		70-135	%	11.15.19 17:37
o-Terphenyl	114		116		109		70-135	%	11.15.19 17:37

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690492-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.15.19 17:17	

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

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

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

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

QC Summary 643339

LT Environmental, Inc.

Palmillo St #001H Flowline

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3107736 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643273-020 — MS Sample Id: 643273-020 S — MSD Sample Id: 643273-020 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)	<49.8	996	1160	116	1140	114	70-135	2	35	mg/kg	11.15.19 18:39	
Diesel Range Organics (DRO)	237	996	1110	88	1150	91	70-135	4	35	mg/kg	11.15.19 18:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		132		70-135	%	11.15.19 18:39
o-Terphenyl	130		128		70-135	%	11.15.19 18:39

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107747 — Matrix: Solid — Date Prep: 11.15.19
MB Sample Id: 7690487-1-BLK — LCS Sample Id: 7690487-1-BKS — LCSD Sample Id: 7690487-1-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	0.127	127	0.120	120	70-130	6	35	mg/kg	11.15.19 13:52	
Toluene	<0.000500	0.100	0.126	126	0.119	119	70-130	6	35	mg/kg	11.15.19 13:52	
Ethylbenzene	<0.00100	0.100	0.128	128	0.120	120	71-129	6	35	mg/kg	11.15.19 13:52	
m,p-Xylenes	<0.00200	0.200	0.257	129	0.243	122	70-135	6	35	mg/kg	11.15.19 13:52	
o-Xylene	<0.00100	0.100	0.128	128	0.122	122	71-133	5	35	mg/kg	11.15.19 13:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		98		70-130	%	11.15.19 13:52
4-Bromofluorobenzene	126		125		116		70-130	%	11.15.19 13:52

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3107747 — Matrix: Soil — Date Prep: 11.15.19
Parent Sample Id: 643336-001 — MS Sample Id: 643336-001 S — MSD Sample Id: 643336-001 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	0.0915	91	0.127	127	70-130	32	35	mg/kg	11.15.19 14:33	
Toluene	<0.00101	0.101	0.0926	92	0.125	125	70-130	30	35	mg/kg	11.15.19 14:33	
Ethylbenzene	<0.00101	0.101	0.0951	94	0.127	127	71-129	29	35	mg/kg	11.15.19 14:33	
m,p-Xylenes	<0.00201	0.201	0.192	96	0.256	128	70-135	29	35	mg/kg	11.15.19 14:33	
o-Xylene	<0.00101	0.101	0.0965	96	0.129	129	71-133	29	35	mg/kg	11.15.19 14:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		99		70-130	%	11.15.19 14:33
4-Bromofluorobenzene	130		102		70-130	%	11.15.19 14:33

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: 643339

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

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

Project Name:	Palmillo St #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.0	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:	9	

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
SW02A	S	11/14/19	1443	0-6'	1	X	X	X	
SW03A	S		1503	0-6'	1	X	X	X	
SW04A	S		1507	0-6'	1	X	X	X	
FS07A	S		1450	6'	1	X	X	X	
FS08A	S	↓	1509	6'	1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11/15/2019 0959	2		11/15/19 10:00
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Chain of Custody

Work Order No: 643339

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

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

Project Name:	Palmillo St 4" COIH Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.0	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:	9

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
~~SW02A~~ SW09 TM	S	11/14/19	1443	0-6'	1	X	X	X
~~SW03A~~ SW11 TM	S		1503	0-6'	1	X	X	X
~~SW04A~~ SW12 TM	S		1507	0-6'	1	X	X	X
FS07A	S		1450	6'	1	X	X	X
FS08A	S	↓	1509	6'	1	X	X	X

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11/15/2019 0959	2		~~11~~ 11/15/19 10:00
3				4		
5				6		

Revised Date 101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/15/2019 10:10:00 AM

Work Order #: 643339

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**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: 11/15/2019

Checklist reviewed by: Jessica Kramer Date: 11/15/2019

Jessica Kramer

Analytical Report 644203

for

LT Environmental, Inc.

Project Manager: Dan Moir

Palmillo State #001H Flowline

012919058

27-FEB-20

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)

27-FEB-20

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

Reference: XENCO Report No(s): **644203**
Palmillo State #001H 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) 644203. 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. 644203 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 644203

LT Environmental, Inc., Arvada, CO

Palmillo State #001H Flowline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS07B	S	11-21-19 13:55	12 ft	644203-001
SW10	S	11-21-19 13:59	0 - 12 ft	644203-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Palmillo State #001H Flowline

Project ID: *012919058*
Work Order Number(s): *644203*

Report Date: *27-FEB-20*
Date Received: *11/22/2019*

Sample receipt non conformances and comments:

V1.001 - Revision (client email) Corrected sample names as follows below JK 02/27/20
SW02B --> SW10

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3108513 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 644203

LT Environmental, Inc., Arvada, CO

Project Name: Palmillo State #001H Flowline

Project Id: 012919058
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Nov-22-19 09:12 am
Report Date: 27-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	644203-001		644203-002									
	Field Id:	FS07B		SW10									
	Depth:	12- ft		0-12 ft									
	Matrix:	SOIL		SOIL									
	Sampled:	Nov-21-19 13:55		Nov-21-19 13:59									
BTEX by EPA 8021B	***Extracted:***	Nov-22-19 10:11		Nov-22-19 10:11									
	Analyzed:	Nov-22-19 19:52		Nov-22-19 20:11									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.00200	0.00200	<0.00201	0.00201								
Toluene		<0.00200	0.00200	<0.00201	0.00201								
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201								
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402								
o-Xylene		<0.00200	0.00200	<0.00201	0.00201								
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201								
Total BTEX		<0.00200	0.00200	<0.00201	0.00201								
Chloride by EPA 300	***Extracted:***	Nov-23-19 08:11		Nov-23-19 08:11									
	Analyzed:	Nov-23-19 11:22		Nov-23-19 11:27									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		860	49.9	282	49.6								
TPH by SW8015 Mod	***Extracted:***	Nov-22-19 17:30		Nov-22-19 17:30									
	Analyzed:	Nov-23-19 09:51		Nov-23-19 10:11									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<49.9	49.9								
Diesel Range Organics (DRO)		<50.2	50.2	<49.9	49.9								
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<49.9	49.9								
Total GRO-DRO		<50.2	50.2	<49.9	49.9								
Total TPH		<50.2	50.2	<49.9	49.9								

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 644203

LT Environmental, Inc., Arvada, CO

Palmillo State #001H Flowline

Sample Id:	**FS07B**	Matrix:	Soil	Date Received:	11.22.19 09.12
Lab Sample Id:	644203-001	Date Collected:	11.21.19 13.55	Sample Depth:	12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.23.19 08.11	Basis:	Wet Weight
Seq Number:	3108509				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**860**	49.9	mg/kg	11.23.19 11.22		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.22.19 17.30	Basis:	Wet Weight
Seq Number:	3108577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.23.19 09.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.23.19 09.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.23.19 09.51	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.23.19 09.51	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.23.19 09.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	11.23.19 09.51	
o-Terphenyl	84-15-1	103	%	70-135	11.23.19 09.51	

Certificate of Analytical Results 644203

LT Environmental, Inc., Arvada, CO

Palmillo State #001H Flowline

Sample Id:	**FS07B**	Matrix:	Soil	Date Received:	11.22.19 09.12
Lab Sample Id:	644203-001	Date Collected:	11.21.19 13.55	Sample Depth:	12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.22.19 10.11	Basis:	Wet Weight
Seq Number:	3108513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.22.19 19.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.22.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	11.22.19 19.52	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.22.19 19.52	

Certificate of Analytical Results 644203

LT Environmental, Inc., Arvada, CO

Palmillo State #001H Flowline

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	11.22.19 09.12
Lab Sample Id:	644203-002	Date Collected:	11.21.19 13.59	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.23.19 08.11	Basis:	Wet Weight
Seq Number:	3108509				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**282**	49.6	mg/kg	11.23.19 11.27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.22.19 17.30	Basis:	Wet Weight
Seq Number:	3108577				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	11.23.19 10.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	11.23.19 10.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	11.23.19 10.11	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	11.23.19 10.11	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	11.23.19 10.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	11.23.19 10.11	
o-Terphenyl	84-15-1	99	%	70-135	11.23.19 10.11	

Certificate of Analytical Results 644203

LT Environmental, Inc., Arvada, CO

Palmillo State #001H Flowline

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	11.22.19 09.12
Lab Sample Id:	644203-002	Date Collected:	11.21.19 13.59	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.22.19 10.11	Basis:	Wet Weight
Seq Number:	3108513				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.22.19 20.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.22.19 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.22.19 20.11	
4-Bromofluorobenzene	460-00-4	114	%	70-130	11.22.19 20.11	

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 644203

LT Environmental, Inc.

Palmillo State #001H Flowline

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3108509 Matrix: Solid Date Prep: 11.23.19
MB Sample Id: 7691034-1-BLK LCS Sample Id: 7691034-1-BKS LCSD Sample Id: 7691034-1-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	256	102	255	102	90-110	0	20	mg/kg	11.23.19 07:48	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3108509 Matrix: Soil Date Prep: 11.23.19
Parent Sample Id: 644199-010 MS Sample Id: 644199-010 S MSD Sample Id: 644199-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	233	198	441	105	449	108	90-110	2	20	mg/kg	11.23.19 09:24	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3108577 Matrix: Solid Date Prep: 11.22.19
MB Sample Id: 7691103-1-BLK LCS Sample Id: 7691103-1-BKS LCSD Sample Id: 7691103-1-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	913	91	896	90	70-135	2	35	mg/kg	11.23.19 05:55	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1080	108	70-135	5	35	mg/kg	11.23.19 05:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		125		130		70-135	%	11.23.19 05:55
o-Terphenyl	122		128		121		70-135	%	11.23.19 05:55

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3108577 Matrix: Solid Date Prep: 11.22.19
MB Sample Id: 7691103-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.23.19 05:36	

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 644203

LT Environmental, Inc.

Palmillo State #001H Flowline

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3108577 Matrix: Soil Date Prep: 11.22.19
Parent Sample Id: 644205-013 MS Sample Id: 644205-013 S MSD Sample Id: 644205-013 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)	<49.9	997	930	93	889	89	70-135	5	35	mg/kg	11.23.19 06:54	
Diesel Range Organics (DRO)	<49.9	997	1130	113	1060	106	70-135	6	35	mg/kg	11.23.19 06:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		70-135	%	11.23.19 06:54
o-Terphenyl	122		113		70-135	%	11.23.19 06:54

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3108513 Matrix: Solid Date Prep: 11.22.19
MB Sample Id: 7691040-1-BLK LCS Sample Id: 7691040-1-BKS LCSD Sample Id: 7691040-1-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	0.0856	86	0.0846	85	70-130	1	35	mg/kg	11.22.19 11:33	
Toluene	<0.00200	0.100	0.0874	87	0.0874	87	70-130	0	35	mg/kg	11.22.19 11:33	
Ethylbenzene	<0.00200	0.100	0.0882	88	0.0881	88	71-129	0	35	mg/kg	11.22.19 11:33	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.187	94	70-135	0	35	mg/kg	11.22.19 11:33	
o-Xylene	<0.00200	0.100	0.0913	91	0.0919	92	71-133	1	35	mg/kg	11.22.19 11:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		99		99		70-130	%	11.22.19 11:33
4-Bromofluorobenzene	98		105		108		70-130	%	11.22.19 11:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3108513 Matrix: Soil Date Prep: 11.22.19
Parent Sample Id: 644186-001 MS Sample Id: 644186-001 S MSD Sample Id: 644186-001 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	0.106	106	0.0999	101	70-130	6	35	mg/kg	11.22.19 12:12	
Toluene	<0.00200	0.100	0.107	107	0.100	101	70-130	7	35	mg/kg	11.22.19 12:12	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0993	100	71-129	7	35	mg/kg	11.22.19 12:12	
m,p-Xylenes	<0.00401	0.200	0.227	114	0.210	106	70-135	8	35	mg/kg	11.22.19 12:12	
o-Xylene	<0.00200	0.100	0.112	112	0.105	106	71-133	6	35	mg/kg	11.22.19 12:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	11.22.19 12:12
4-Bromofluorobenzene	118		118		70-130	%	11.22.19 12:12

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

Chain of Custody

XENCO LABORATORIES

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 644203

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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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Palmillo State #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.4	Thermometer ID	T-NM-009
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS07B	S	11/21/19	1355	12'	1	X	X	X
SW02B	S	11/21/19	1359	0-12'	1	X	X	X

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			11/22/19 9:05	2		11/22/19 9:12
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Chain of Custody

XENCO LABORATORIES

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 644203

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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Palmillo State #001H Flowline	Turn Around	
Project Number:	012919058	Routine: ☐	
PO #:	2RP-5389	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT

Temperature (°C):	1.4	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	T-NM-009
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS07B	S	11/21/19	1355	12'	1	X	X	X
~~SW02B~~ SW10M	S	11/21/19	1359	0-12'	1	X	X	X

Work Order Notes

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

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima		11/22/19 9:05	2		11/21/19 9:12
3				4		
5				6		

Revised Date101419 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/22/2019 09:12:00 AM

Work Order #: 644203

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)?	1.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 11/22/2019

Checklist reviewed by: Jessica Kramer Date: 11/23/2019