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	NRM2009458386
District RP	
Facility ID	
Application ID	

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

Location of Release Source

Latitude 32.065255 Longitude -103.917619
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Ranch 6 Federal 001H	Site Type Tank Battery
Date Release Discovered 03/20/2020	API# *(if applicable)* 30-015-36883

Unit Letter	Section	Township	Range	County
O	6	26S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 3.23	Volume Recovered (bbls) 3
☒ Produced Water	Volume Released (bbls) 23.72	Volume Recovered (bbls) 22
	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: The lower half of the split body ¼ turn ball valve was removed during repairs. All fluids contained in the heater treater released onto the ground. A third party contractor will be retained to complete remediation activities.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009458386
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of fluids greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes by Amy Ruth to Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; 'Venegas, Victoria, EMNRD'; 'Morgan, Crisha A'; blm_nm_cfo_spill@blm.gov; 'Griswold, Jim, EMNRD' on Saturday, March 21, 2020 at 9:11 AM via email.

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 4-2-20

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

OCD Only

Received by: Ramona Marcus Date: 4/3/2020

Location:	Ross Ranch 6 Federal 001	
Spill Date:	3/20/2020	

Area 1		
Approximate Area =	3777.60	sq. ft.
Average Saturation (or depth) of spill =	0.75	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	3.15	bbls
Total Produced Water =	23.11	bbls

Area 2		
Approximate Area =	529.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.06	bbls
Total Produced Water =	0.41	bbls

Area 3		
Approximate Area =	453.00	sq. ft.
Average Saturation (or depth) of spill =	1.00	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.02	bbls
Total Produced Water =	0.18	bbls

Area 4		
Approximate Area =	420.00	sq. ft.
Average Saturation (or depth) of spill =	0.13	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	0.02	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**3.23**	**bbls**
Total Produced Water =	**23.72**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**3.00**	**bbls**
Total Produced Water =	**22.00**	**bbls**

Incident ID	NRM2009458386
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009458386
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Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 6/18/20

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Cristina Eads Date: 06/18/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009458386
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

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

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 6/18/20

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Cristina Eads Date: 06/18/2020

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: D E N I E D Date: 08/27/2020

Printed Name: Cristina Eads Title: Environmental Specialist

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

June 18, 2020

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

RE: Closure Request
Ross Ranch 6 Federal 001H
Incident Number NRM2009458386
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 excavation activities at the Ross Ranch 6 Federal 001H (Site) in Unit O, Section 6, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2009458386.

RELEASE BACKGROUND

On March 20, 2020, a ball valve was removed during repairs, which allowed all fluids contained in the heater-treater to release within the process equipment containment berm. The containment berm was breached on the east side and fluids were released onto the surface of the well pad. Approximately 3.23 barrels (bbls) of crude oil and 23.72 bbls of produced water were released. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 3 bbls of crude oil and 22 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on April 2, 2020 and was assigned Incident Number NRM2009458386.

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 New Mexico Office of the State Engineer (NMOSE) well

C-01360, located 0.5 mile east of the Site. The groundwater well has a reported depth to groundwater of 173 feet bgs and a total depth of 770 feet bgs. The closest continuously flowing water or significant watercourse to the Site is a tributary to the Pecos River, located approximately 970 feet east of the Site. All wells used for depth to groundwater determination are depicted on Figure 1. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (medium potential karst designation area). Site receptors are identified on Figure 1.

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 AND EXCAVATION ACTIVITIES

On April 6, 2020, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Surficial staining was observed in the release area. LTE personnel collected five preliminary soil samples (SS01 through SS05) from within the release extent from a depth of 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

The preliminary 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 Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on visual observations and laboratory analytical results for the preliminary soil samples, excavation activities were scheduled. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1.

Between April 28, 2020 and May 4, 2020, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by field screening activities and laboratory analytical results for the preliminary soil samples. Excavation activities were performed using a hydro-vacuum and track-mounted backhoe. The excavation was separated into two areas due to the presence of the process equipment containment berm. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth ranging from 0.5 feet to 1.5 feet bgs.

Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by placing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 and SW03 through SW08 were collected from the sidewalls of the excavations from depths ranging from the ground surface to 1 foot bgs. Composite soil samples FS01 through FS27 were collected from the floor of the excavations from depths ranging from 0.5 feet to 1.5 feet bgs. Sidewall sample SW02 was collected for field screening purposes only and was not submitted for laboratory analysis. The excavation soil samples were collected, handled, and analyzed as described above. The excavation extents and excavation soil sample locations are presented on Figure 3. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 1.

The combined excavation extents measured approximately 7,164 square feet. A total of approximately 265 cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation soil sampling, the excavation was secured with fencing.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01, SS02, SS03, and SS05 indicated that TPH-GRO and TPH-DRO and TPH concentrations exceeded the Closure Criteria. Impacted soil was excavated from these areas. Laboratory analytical results excavation sidewall samples SW01 and SW03 through SW08, and excavation floor samples FS01 through FS27 indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was required. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

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CONCLUSIONS

Site assessment and excavation activities were conducted at the Site to address the March 20, 2020 release of crude oil and produced water at the Site. Preliminary soil samples were collected within the release area to assess the lateral extent of impacted soil. Based on the laboratory analytical results for the preliminary soil samples, impacted soil was excavated. Laboratory analytical results for the excavation soil samples collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria, and no further remediation was required.

The majority of the released fluids were recovered during initial response activities. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. Based on initial response efforts, removal of impacted soil, and laboratory analytical results compliant with the Closure Criteria, XTO requests NFA for Incident Number NRM2009458386.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Elizabeth Naka
Staff Environmental Scientist

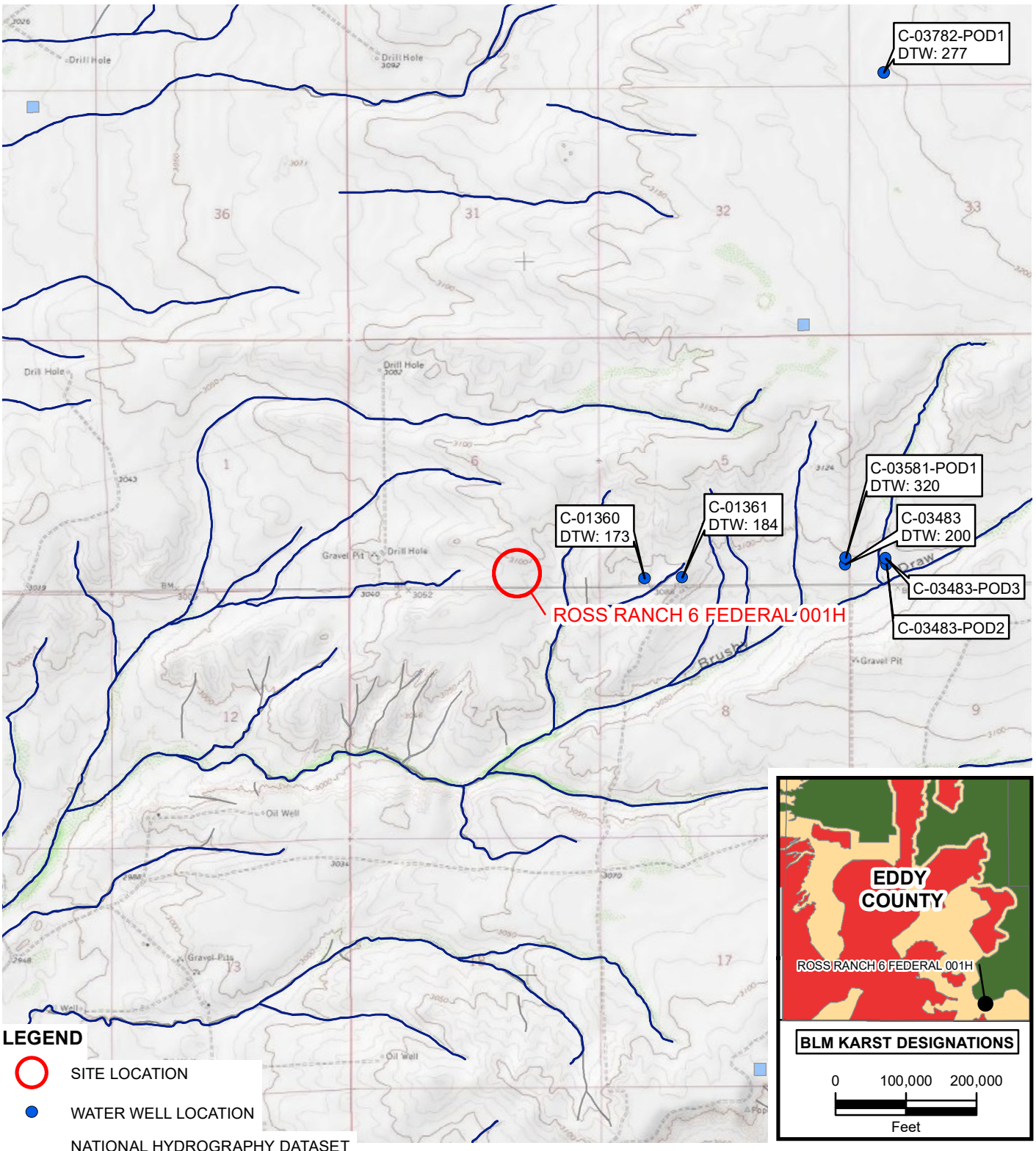
Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Photographic Log
Attachment 2	Laboratory Analytical Results

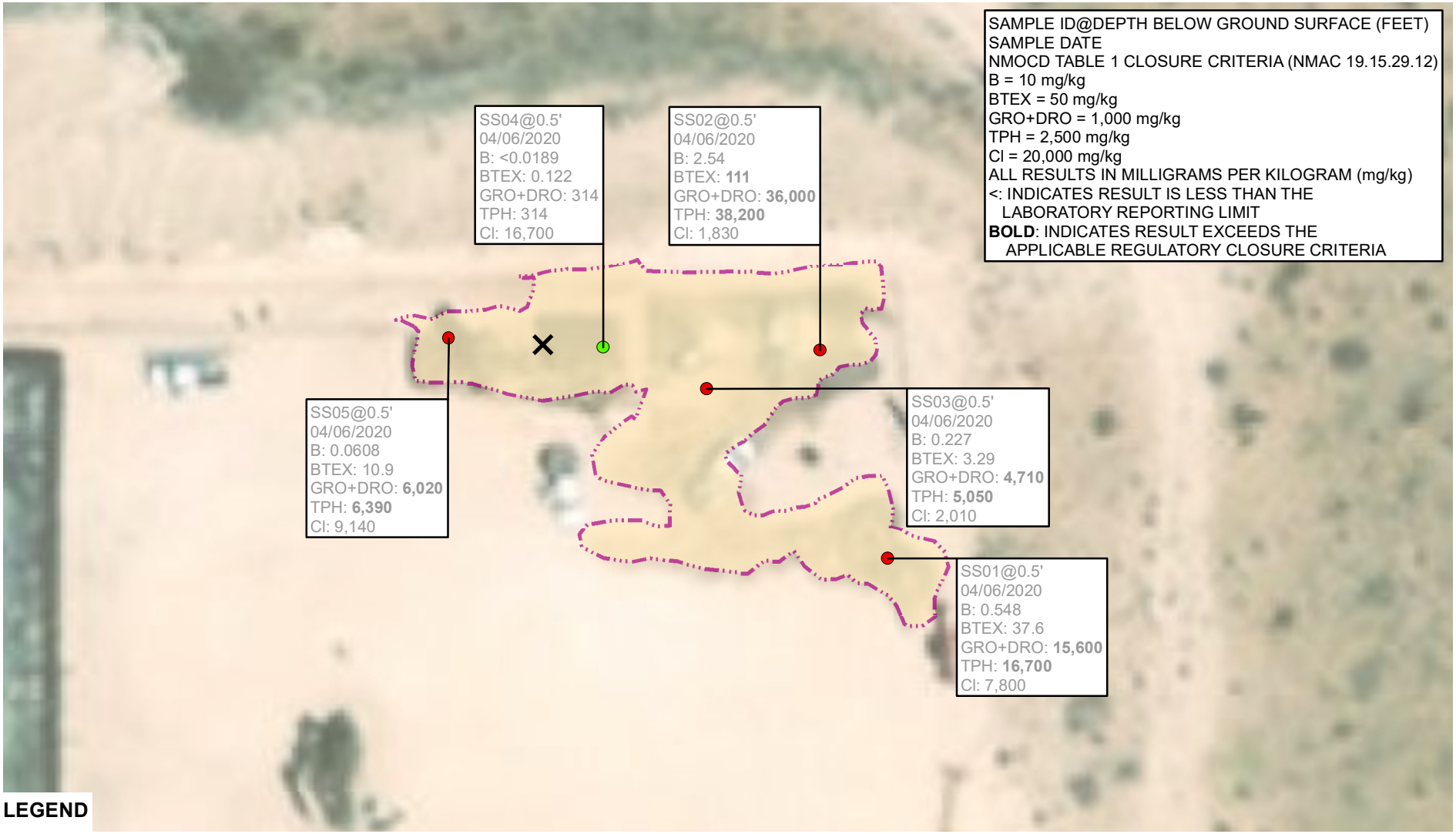
FIGURES



NOTE: INCIDENT NUMBER NRM2009458386
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
ROSS RANCH 6 FEDERAL 001H
UNIT O SEC 6 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920049_ROSS RANCH 6 FEDERAL 001H\012920049_FIG01_SL_RECEPTOR_2020.mxd



LEGEND

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

IMAGE COURTESY OF ESRI

0 40 80
Feet

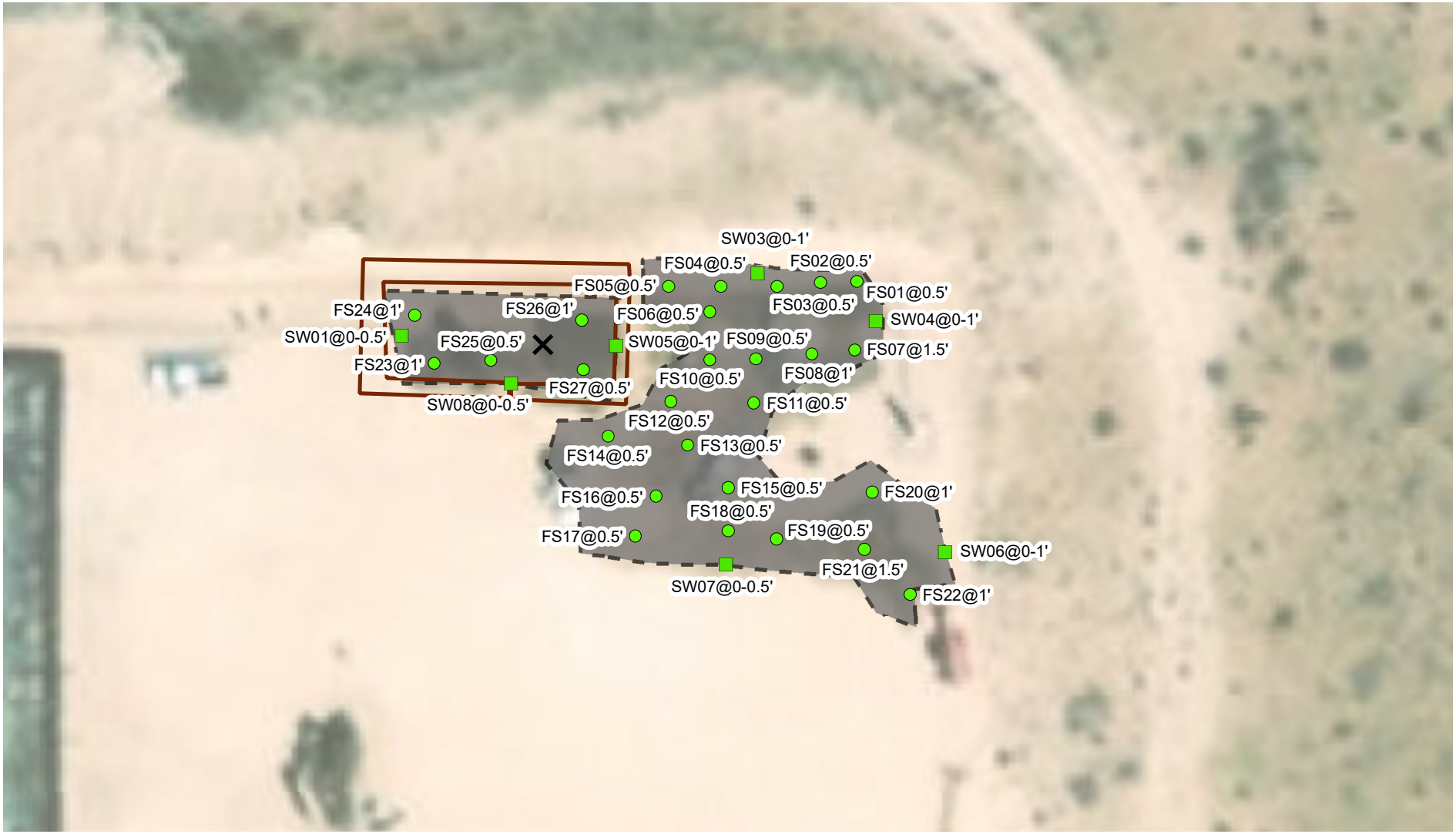
N

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

TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED
NOTE: INCIDENT NUMBER NRM2009458386

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
ROSS RANCH 6 FEDERAL 001H
UNIT O SEC 6 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920049_ROSS RANCH 6 FEDERAL 001H\012920049_FIG02_PRELIMINARY_2020.mxd



LEGEND

- RELEASE LOCATION
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT
- BERM EXTENT

IMAGE COURTESY OF ESRI

0 40 80
Feet

N

NOTE: INCIDENT NUMBER NRM2009458386
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
ROSS RANCH 6 FEDERAL 001H
UNIT O SEC 6 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920049_ROSS RANCH 6 FEDERAL 001H\012920049_FIG03_EXCAVATION_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

ROSS RANCH 6 FEDEERAL 001H
INCIDENT NUMBER NRM2009458386
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	04/06/2020	0.548	6.72	5.14	25.2	37.6	4,520	11,100	1,110	**15,600**	**16,700**	7,800
SS02	0.5	04/06/2020	2.54	36.5	12.4	59.6	**111**	12,400	23,600	2,160	**36,000**	**38,200**	1,830
SS03	0.5	04/06/2020	0.227	0.839	0.423	1.80	3.29	371	4,340	335	**4,710**	**5,050**	2,010
SS04	0.5	04/06/2020	<0.0189	<0.0189	<0.0189	0.122	0.122	<49.8	314	<49.8	314	314	16,700
SS05	0.5	04/06/2020	0.0608	1.11	1.53	8.24	10.9	1,110	4,910	372	**6,020**	**6,390**	9,140
FS01	0.5	04/28/2020	<0.00200	<0.00200	0.00945	0.0348	0.0443	<50.0	641	58.1	641	699	164
FS02	0.5	04/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	150	<49.8	150	150	128
FS03	0.5	04/28/2020	<0.00198	<0.00198	0.0241	0.0258	0.0499	<49.8	691	67.7	691	759	1,130
FS04	0.5	04/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	546	62.6	546	609	875
FS05	0.5	04/28/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	93.5	<50.0	93.5	93.5	109
FS06	0.5	04/28/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	176	<50.0	176	176	372
FS07	1.5	04/30/2020	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<50.2	257	84.3	257	341	189
FS08	1	04/30/2020	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<49.8	187	<49.8	187	187	39.7
FS09	0.5	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	129	<49.8	129	129	64.3
FS10	0.5	04/30/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	84.1	<49.9	84.1	84.1	67.0
FS11	0.5	04/30/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	214	<50.2	214	214	369
FS12	0.5	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	52.8	<50.1	52.8	52.8	86.5
FS13	0.5	04/30/2020	<0.00229	<0.00229	0.0709	0.0901	0.161	59.3	837	64.9	896	961	358
FS14	0.5	04/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	43.5
FS15	0.5	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	69.5	<50.1	69.5	69.5	93.2
FS16	0.5	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	75.4
FS17	0.5	04/30/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	133	<49.9	133	133	105
FS18	0.5	04/30/2020	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<50.0	255	<50.0	255	255	124

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TABLE 1
SOIL ANALYTICAL RESULTS

ROSS RANCH 6 FEDEERAL 001H
INCIDENT NUMBER NRM2009458386
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**
FS19	0.5	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	344	<50.2	344	344	115
FS20	1	04/30/2020	<0.0179	<0.0179	<0.0179	<0.0179	<0.0179	<50.1	190	<50.1	190	190	32.5
FS21	1.5	04/30/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	87.5	<49.8	87.5	87.5	25.6
FS22	1	04/30/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	162
FS23	1	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	185	<50.1	185	185	198
FS24	1	05/04/2020	<0.00198	<0.00198	0.00751	0.0198	0.0273	<49.8	231	<49.8	231	231	42.8
FS25	0.5	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	4,140
FS26	1	05/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	2,190
FS27	0.5	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	6,570
SW01	0 - 0.5	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	412	<50.1	412	412	653
SW03	0 - 1	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	465	<50.2	465	465	61.7
SW04	0 - 1	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	170	<49.9	170	170	288
SW05	0 - 1	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	658	71.7	658	730	146
SW06	0 - 1	05/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	36.4
SW07	0 - 0.5	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	96.5	<50.0	96.5	96.5	65.5
SW08	0 - 0.5	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	525	<50.1	525	525	358

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
TEXT - indicates soil removed during excavation activities

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ATTACHMENT 1: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of staining on pad from release facing west.

Photograph 2: View of breached earthen berm and staining in northeast corner of well pad.

Photograph 3: View of excavation facing west.

Photograph 4: View of hydrovac excavation around equipment facing southwest.

Photograph 5: View of excavation around equipment facing northwest.

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 658052

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6Fed 1H

012920049

04.08.2020

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)

04.08.2020

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

Reference: XENCO Report No(s): **658052**
Ross Ranch 6Fed 1H
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) 658052. 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. 658052 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04.06.2020 11:39	0.5 ft	658052-001
SS02	S	04.06.2020 11:41	0.5 ft	658052-002
SS03	S	04.06.2020 11:44	0.5 ft	658052-003
SS04	S	04.06.2020 11:47	0.5 ft	658052-004
SS05	S	04.06.2020 11:50	0.5 ft	658052-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Ranch 6Fed 1H

Project ID: *012920049*
Work Order Number(s): *658052*

Report Date: *04.08.2020*
Date Received: *04.06.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3122150 BTEX by EPA 8021B

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

Certificate of Analysis Summary 658052

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6Fed 1H

Project Id: 012920049
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon 04.06.2020 15:45
Report Date: 04.08.2020 12:12
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	658052-001		658052-002		658052-003		658052-004		658052-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.06.2020 11:39		04.06.2020 11:41		04.06.2020 11:44		04.06.2020 11:47		04.06.2020 11:50	
BTEX by EPA 8021B	***Extracted:***	04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30	
	Analyzed:	04.06.2020 21:10		04.06.2020 21:30		04.06.2020 21:51		04.06.2020 23:12		04.06.2020 23:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.548	0.200	2.54	0.202	0.227	0.200	<0.0189	0.0189	0.0608	0.0498
Toluene		6.72	0.200	36.5	0.202	0.839	0.200	<0.0189	0.0189	1.11	0.199
Ethylbenzene		5.14	0.200	12.4	0.202	0.423	0.200	<0.0189	0.0189	1.53	0.199
m,p-Xylenes		17.4	0.401	42.1	0.403	1.20	0.401	0.122	0.0377	5.87	0.398
o-Xylene		7.80	0.200	17.5	0.202	0.602	0.200	<0.0189	0.0189	2.37	0.199
Total Xylenes		25.2	0.200	59.6	0.202	1.80	0.200	0.122	0.0189	8.24	0.199
Total BTEX		37.6	0.200	111	0.202	3.29	0.200	0.122	0.0189	10.9	0.0498
Chloride by EPA 300	***Extracted:***	04.07.2020 11:01		04.07.2020 11:01		04.07.2020 11:01		04.07.2020 11:01		04.07.2020 11:01	
	Analyzed:	04.07.2020 16:25		04.07.2020 16:42		04.07.2020 16:47		04.07.2020 16:53		04.07.2020 16:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7800	49.8	1830	50.3	2010	49.9	16700	101	9140	50.1
TPH by SW8015 Mod	***Extracted:***	04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30		04.06.2020 16:30	
	Analyzed:	04.07.2020 09:20		04.07.2020 09:40		04.06.2020 17:56		04.06.2020 18:16		04.06.2020 18:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		4520	251	12400	503	371	50.2	<49.8	49.8	1110	50.3
Diesel Range Organics (DRO)		11100	251	23600	503	4340	50.2	314	49.8	4910	50.3
Motor Oil Range Hydrocarbons (MRO)		1110	251	2160	503	335	50.2	<49.8	49.8	372	50.3
Total GRO-DRO		15600	251	36000	503	4710	50.2	314	49.8	6020	50.3
Total TPH		16700	251	38200	503	5050	50.2	314	49.8	6390	50.3

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-001	Date Collected:	04.06.2020 11:39	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.07.2020 11:01	Basis:	Wet Weight
Seq Number:	3122305				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7800**	49.8	mg/kg	04.07.2020 16:25		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**4520**	251	mg/kg	04.07.2020 09:20		5
Diesel Range Organics (DRO)	C10C28DRO	**11100**	251	mg/kg	04.07.2020 09:20		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1110**	251	mg/kg	04.07.2020 09:20		5
Total GRO-DRO	PHC628	**15600**	251	mg/kg	04.07.2020 09:20		5
Total TPH	PHC635	**16700**	251	mg/kg	04.07.2020 09:20		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.07.2020 09:20	
o-Terphenyl	84-15-1	106	%	70-135	04.07.2020 09:20	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-001	Date Collected:	04.06.2020 11:39	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.548**	0.200	mg/kg	04.06.2020 21:10		100
Toluene	108-88-3	**6.72**	0.200	mg/kg	04.06.2020 21:10		100
Ethylbenzene	100-41-4	**5.14**	0.200	mg/kg	04.06.2020 21:10		100
m,p-Xylenes	179601-23-1	**17.4**	0.401	mg/kg	04.06.2020 21:10		100
o-Xylene	95-47-6	**7.80**	0.200	mg/kg	04.06.2020 21:10		100
Total Xylenes	1330-20-7	**25.2**	0.200	mg/kg	04.06.2020 21:10		100
Total BTEX		**37.6**	0.200	mg/kg	04.06.2020 21:10		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.06.2020 21:10	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.06.2020 21:10	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-002	Date Collected:	04.06.2020 11:41	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.07.2020 11:01	Basis:	Wet Weight
Seq Number:	3122305				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1830**	50.3	mg/kg	04.07.2020 16:42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12400**	503	mg/kg	04.07.2020 09:40		10
Diesel Range Organics (DRO)	C10C28DRO	**23600**	503	mg/kg	04.07.2020 09:40		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**2160**	503	mg/kg	04.07.2020 09:40		10
Total GRO-DRO	PHC628	**36000**	503	mg/kg	04.07.2020 09:40		10
Total TPH	PHC635	**38200**	503	mg/kg	04.07.2020 09:40		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.07.2020 09:40	
o-Terphenyl	84-15-1	124	%	70-135	04.07.2020 09:40	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-002	Date Collected:	04.06.2020 11:41	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**2.54**	0.202	mg/kg	04.06.2020 21:30		100
Toluene	108-88-3	**36.5**	0.202	mg/kg	04.06.2020 21:30		100
Ethylbenzene	100-41-4	**12.4**	0.202	mg/kg	04.06.2020 21:30		100
m,p-Xylenes	179601-23-1	**42.1**	0.403	mg/kg	04.06.2020 21:30		100
o-Xylene	95-47-6	**17.5**	0.202	mg/kg	04.06.2020 21:30		100
Total Xylenes	1330-20-7	**59.6**	0.202	mg/kg	04.06.2020 21:30		100
Total BTEX		**111**	0.202	mg/kg	04.06.2020 21:30		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.06.2020 21:30	
1,4-Difluorobenzene	540-36-3	88	%	70-130	04.06.2020 21:30	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-003	Date Collected:	04.06.2020 11:44	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.07.2020 11:01	Basis:	Wet Weight
Seq Number:	3122305				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2010**	49.9	mg/kg	04.07.2020 16:47		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**371**	50.2	mg/kg	04.06.2020 17:56		1
Diesel Range Organics (DRO)	C10C28DRO	**4340**	50.2	mg/kg	04.06.2020 17:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**335**	50.2	mg/kg	04.06.2020 17:56		1
Total GRO-DRO	PHC628	**4710**	50.2	mg/kg	04.06.2020 17:56		1
Total TPH	PHC635	**5050**	50.2	mg/kg	04.06.2020 17:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	04.06.2020 17:56	
o-Terphenyl	84-15-1	104	%	70-135	04.06.2020 17:56	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-003	Date Collected:	04.06.2020 11:44	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.227**	0.200	mg/kg	04.06.2020 21:51		100
Toluene	108-88-3	**0.839**	0.200	mg/kg	04.06.2020 21:51		100
Ethylbenzene	100-41-4	**0.423**	0.200	mg/kg	04.06.2020 21:51		100
m,p-Xylenes	179601-23-1	**1.20**	0.401	mg/kg	04.06.2020 21:51		100
o-Xylene	95-47-6	**0.602**	0.200	mg/kg	04.06.2020 21:51		100
Total Xylenes	1330-20-7	**1.80**	0.200	mg/kg	04.06.2020 21:51		100
Total BTEX		**3.29**	0.200	mg/kg	04.06.2020 21:51		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.06.2020 21:51	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.06.2020 21:51	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-004	Date Collected:	04.06.2020 11:47	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.07.2020 11:01	Basis:	Wet Weight
Seq Number:	3122305				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16700**	101	mg/kg	04.07.2020 16:53		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122096				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.06.2020 18:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**314**	49.8	mg/kg	04.06.2020 18:16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.06.2020 18:16	U	1
Total GRO-DRO	PHC628	**314**	49.8	mg/kg	04.06.2020 18:16		1
Total TPH	PHC635	**314**	49.8	mg/kg	04.06.2020 18:16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.06.2020 18:16	
o-Terphenyl	84-15-1	114	%	70-135	04.06.2020 18:16	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-004	Date Collected:	04.06.2020 11:47	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0189	0.0189	mg/kg	04.06.2020 23:12	U	1
Toluene	108-88-3	<0.0189	0.0189	mg/kg	04.06.2020 23:12	U	1
Ethylbenzene	100-41-4	<0.0189	0.0189	mg/kg	04.06.2020 23:12	U	1
m,p-Xylenes	179601-23-1	**0.122**	0.0377	mg/kg	04.06.2020 23:12		1
o-Xylene	95-47-6	<0.0189	0.0189	mg/kg	04.06.2020 23:12	U	1
Total Xylenes	1330-20-7	**0.122**	0.0189	mg/kg	04.06.2020 23:12		1
Total BTEX		**0.122**	0.0189	mg/kg	04.06.2020 23:12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.06.2020 23:12	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.06.2020 23:12	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-005	Date Collected:	04.06.2020 11:50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.07.2020 11:01	Basis:	Wet Weight
Seq Number:	3122305				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9140**	50.1	mg/kg	04.07.2020 16:58		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122096				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1110**	50.3	mg/kg	04.06.2020 18:37		1
Diesel Range Organics (DRO)	C10C28DRO	**4910**	50.3	mg/kg	04.06.2020 18:37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**372**	50.3	mg/kg	04.06.2020 18:37		1
Total GRO-DRO	PHC628	**6020**	50.3	mg/kg	04.06.2020 18:37		1
Total TPH	PHC635	**6390**	50.3	mg/kg	04.06.2020 18:37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	04.06.2020 18:37	
o-Terphenyl	84-15-1	116	%	70-135	04.06.2020 18:37	

Certificate of Analytical Results 658052

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 1H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	04.06.2020 15:45
Lab Sample Id:	658052-005	Date Collected:	04.06.2020 11:50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.06.2020 16:30	Basis:	Wet Weight
Seq Number:	3122150				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0608**	0.0498	mg/kg	04.06.2020 23:33		100
Toluene	108-88-3	**1.11**	0.199	mg/kg	04.06.2020 23:33		100
Ethylbenzene	100-41-4	**1.53**	0.199	mg/kg	04.06.2020 23:33		100
m,p-Xylenes	179601-23-1	**5.87**	0.398	mg/kg	04.06.2020 23:33		100
o-Xylene	95-47-6	**2.37**	0.199	mg/kg	04.06.2020 23:33		100
Total Xylenes	1330-20-7	**8.24**	0.199	mg/kg	04.06.2020 23:33		100
Total BTEX		**10.9**	0.0498	mg/kg	04.06.2020 23:33		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.06.2020 23:33	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.06.2020 23:33	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

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 658052

LT Environmental, Inc.

Ross Ranch 6Fed 1H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122305 — Matrix: Solid — Date Prep: 04.07.2020
MB Sample Id: 7700689-1-BLK — LCS Sample Id: 7700689-1-BKS — LCSD Sample Id: 7700689-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	260	104	260	104	90-110	0	20	mg/kg	04.07.2020 16:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122305 — Matrix: Soil — Date Prep: 04.07.2020
Parent Sample Id: 658052-001 — MS Sample Id: 658052-001 S — MSD Sample Id: 658052-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7800	202	8010	104	8000	99	90-110	0	20	mg/kg	04.07.2020 16:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3122305 — Matrix: Soil — Date Prep: 04.07.2020
Parent Sample Id: 658074-001 — MS Sample Id: 658074-001 S — MSD Sample Id: 658074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	34.1	199	248	107	257	110	90-110	4	20	mg/kg	04.07.2020 17:47	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122090 — Matrix: Solid — Date Prep: 04.06.2020
MB Sample Id: 7700605-1-BLK — LCS Sample Id: 7700605-1-BKS — LCSD Sample Id: 7700605-1-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	870	87	861	86	70-135	1	35	mg/kg	04.06.2020 13:16	
Diesel Range Organics (DRO)	<50.0	1000	893	89	871	87	70-135	2	35	mg/kg	04.06.2020 13:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		116		116		70-135	%	04.06.2020 13:16
o-Terphenyl	94		97		95		70-135	%	04.06.2020 13:16

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122096 — Matrix: Solid — Date Prep: 04.06.2020
MB Sample Id: 7700604-1-BLK — LCS Sample Id: 7700604-1-BKS — LCSD Sample Id: 7700604-1-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	976	98	979	98	70-135	0	35	mg/kg	04.06.2020 13:16	
Diesel Range Organics (DRO)	<50.0	1000	1140	114	1140	114	70-135	0	35	mg/kg	04.06.2020 13:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		123		123		70-135	%	04.06.2020 13:16
o-Terphenyl	118		124		124		70-135	%	04.06.2020 13:16

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 658052

LT Environmental, Inc.

Ross Ranch 6Fed 1H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122090 Matrix: Solid Date Prep: 04.06.2020
MB Sample Id: 7700605-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.06.2020 12:56	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122096 Matrix: Solid Date Prep: 04.06.2020
MB Sample Id: 7700604-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.06.2020 12:56	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122090 Matrix: Soil Date Prep: 04.06.2020
Parent Sample Id: 657373-002 MS Sample Id: 657373-002 S MSD Sample Id: 657373-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	1060	105	940	94	70-135	12	35	mg/kg	04.06.2020 14:17	
Diesel Range Organics (DRO)	208	1010	1210	99	1180	97	70-135	3	35	mg/kg	04.06.2020 14:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		115		70-135	%	04.06.2020 14:17
o-Terphenyl	120		110		70-135	%	04.06.2020 14:17

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122096 Matrix: Soil Date Prep: 04.06.2020
Parent Sample Id: 657373-001 MS Sample Id: 657373-001 S MSD Sample Id: 657373-001 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)	<49.9	997	976	98	970	97	70-135	1	35	mg/kg	04.06.2020 14:17	
Diesel Range Organics (DRO)	<49.9	997	1160	116	1160	116	70-135	0	35	mg/kg	04.06.2020 14:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		121		70-135	%	04.06.2020 14:17
o-Terphenyl	125		122		70-135	%	04.06.2020 14:17

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 658052

LT Environmental, Inc.

Ross Ranch 6Fed 1H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3122150 Matrix: Solid Date Prep: 04.06.2020
MB Sample Id: 7700660-1-BLK LCS Sample Id: 7700660-1-BKS LCSD Sample Id: 7700660-1-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	0.102	102	0.103	103	70-130	1	35	mg/kg	04.06.2020 16:45	
Toluene	<0.00200	0.100	0.0959	96	0.0988	99	70-130	3	35	mg/kg	04.06.2020 16:45	
Ethylbenzene	<0.00200	0.100	0.0881	88	0.0931	93	71-129	6	35	mg/kg	04.06.2020 16:45	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.193	97	70-135	7	35	mg/kg	04.06.2020 16:45	
o-Xylene	<0.00200	0.100	0.0926	93	0.0971	97	71-133	5	35	mg/kg	04.06.2020 16:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		105		105		70-130	%	04.06.2020 16:45
4-Bromofluorobenzene	93		90		92		70-130	%	04.06.2020 16:45

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3122150 Matrix: Soil Date Prep: 04.06.2020
Parent Sample Id: 658041-001 MS Sample Id: 658041-001 S MSD Sample Id: 658041-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0738	73	0.0724	72	70-130	2	35	mg/kg	04.06.2020 17:46	
Toluene	<0.00201	0.101	0.0788	78	0.0731	73	70-130	8	35	mg/kg	04.06.2020 17:46	
Ethylbenzene	<0.00201	0.101	0.0904	90	0.0863	86	71-129	5	35	mg/kg	04.06.2020 17:46	
m,p-Xylenes	<0.00402	0.201	0.165	82	0.157	79	70-135	5	35	mg/kg	04.06.2020 17:46	
o-Xylene	0.0122	0.101	0.106	93	0.0983	86	71-133	8	35	mg/kg	04.06.2020 17:46	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	04.06.2020 17:46
4-Bromofluorobenzene	91		91		70-130	%	04.06.2020 17:46

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

Chain of Custody

Work Order No: 658052

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 _____ of _____

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849 Email:		atrejo@ltenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ rownfields R☐C S☐perfund ☐
State of Project:
Reporting:Level II ☐ evel III ☐ ST/UST T☐RP ☐vel IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Ranch 6Fed 1H	Turn Around	
Project Number:	012920049	Routine X	
P.O. Number:		Rush:	
Sampler's Name:	Armando Trejo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.8	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:	5

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	
SS01	S	4/6/2020	1139	.5'	1	X	X	X	
SS02	S	4/6/2020	1141	.5'	1	X	X	X	
SS03	S	4/6/2020	1144	.5'	1	X	X	X	
SS04	S	4/6/2020	1147	.5'	1	X	X	X	
SS05	S	4/6/2020	1150	.5'	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
		4/6/20 15:45	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.06.2020 03.45.00 PM

Work Order #: 658052

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)?	3.8
#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: 04.06.2020

Checklist reviewed by: Jessica Kramer Date: 04.07.2020

Jessica Kramer

Analytical Report 660037

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6 Fed 001H

012920049

04.29.2020

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)

04.29.2020

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

Reference: XENCO Report No(s): **660037**
Ross Ranch 6 Fed 001H
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 660037. 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. 660037 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	04.28.2020 13:03	0.5 ft	660037-001
FS02	S	04.28.2020 13:05	0.5 ft	660037-002
FS03	S	04.28.2020 13:10	0.5 ft	660037-003
FS04	S	04.28.2020 13:15	0.5 ft	660037-004
FS05	S	04.28.2020 13:20	0.5 ft	660037-005
FS06	S	04.28.2020 13:25	0.5 ft	660037-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Ranch 6 Fed 001H

Project ID:	*012920049*	Report Date:	*04.29.2020*
Work Order Number(s):	*660037*	Date Received:	*04.28.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 660037

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Fed 001H

Project Id: 012920049
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 04.28.2020 16:28
Report Date: 04.29.2020 12:51
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660037-001		660037-002		660037-003		660037-004		660037-005		660037-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.28.2020 13:03		04.28.2020 13:05		04.28.2020 13:10		04.28.2020 13:15		04.28.2020 13:20		04.28.2020 13:25	
BTEX by EPA 8021B	***Extracted:***	04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00		04.28.2020 18:00	
	Analyzed:	04.29.2020 01:46		04.29.2020 02:07		04.29.2020 02:29		04.29.2020 03:54		04.29.2020 04:16		04.29.2020 04:37	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		0.00945	0.00200	<0.00200	0.00200	0.0241	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		0.00924	0.00400	<0.00401	0.00401	0.0199	0.00395	<0.00401	0.00401	<0.00399	0.00399	<0.00396	0.00396
o-Xylene		0.0256	0.00200	<0.00200	0.00200	0.00593	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		0.0348	0.00200	<0.00200	0.00200	0.0258	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		0.0443	0.00200	<0.00200	0.00200	0.0499	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30	
	Analyzed:	04.28.2020 20:04		04.28.2020 20:09		04.28.2020 20:15		04.28.2020 20:32		04.28.2020 20:37		04.28.2020 20:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		164	49.8	128	9.98	1130	49.9	875	50.1	109	49.4	372	50.1
TPH by SW8015 Mod	***Extracted:***	04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30		04.28.2020 17:30	
	Analyzed:	04.29.2020 02:27		04.29.2020 02:47		04.29.2020 03:08		04.29.2020 03:28		04.29.2020 03:49		04.29.2020 04:29	
	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	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.0	50.0	<50.0	50.0
Diesel Range Organics (DRO)		641	50.0	150	49.8	691	49.8	546	50.1	93.5	50.0	176	50.0
Motor Oil Range Hydrocarbons (MRO)		58.1	50.0	<49.8	49.8	67.7	49.8	62.6	50.1	<50.0	50.0	<50.0	50.0
Total GRO-DRO		641	50.0	150	49.8	691	49.8	546	50.1	93.5	50.0	176	50.0
Total TPH		699	50.0	150	49.8	759	49.8	609	50.1	93.5	50.0	176	50.0

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-001	Date Collected:	04.28.2020 13:03	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**164**	49.8	mg/kg	04.28.2020 20:04		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.29.2020 02:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	**641**	50.0	mg/kg	04.29.2020 02:27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**58.1**	50.0	mg/kg	04.29.2020 02:27		1
Total GRO-DRO	PHC628	**641**	50.0	mg/kg	04.29.2020 02:27		1
Total TPH	PHC635	**699**	50.0	mg/kg	04.29.2020 02:27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.29.2020 02:27	
o-Terphenyl	84-15-1	107	%	70-135	04.29.2020 02:27	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-001	Date Collected:	04.28.2020 13:03	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.29.2020 01:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.29.2020 01:46	U	1
Ethylbenzene	100-41-4	**0.00945**	0.00200	mg/kg	04.29.2020 01:46		1
m,p-Xylenes	179601-23-1	**0.00924**	0.00400	mg/kg	04.29.2020 01:46		1
o-Xylene	95-47-6	**0.0256**	0.00200	mg/kg	04.29.2020 01:46		1
Total Xylenes	1330-20-7	**0.0348**	0.00200	mg/kg	04.29.2020 01:46		1
Total BTEX		**0.0443**	0.00200	mg/kg	04.29.2020 01:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.29.2020 01:46	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.29.2020 01:46	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-002	Date Collected:	04.28.2020 13:05	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**128**	9.98	mg/kg	04.28.2020 20:09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.29.2020 02:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**150**	49.8	mg/kg	04.29.2020 02:47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.29.2020 02:47	U	1
Total GRO-DRO	PHC628	**150**	49.8	mg/kg	04.29.2020 02:47		1
Total TPH	PHC635	**150**	49.8	mg/kg	04.29.2020 02:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.29.2020 02:47	
o-Terphenyl	84-15-1	115	%	70-135	04.29.2020 02:47	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-002	Date Collected:	04.28.2020 13:05	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.29.2020 02:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.29.2020 02:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.29.2020 02:07	
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.29.2020 02:07	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-003	Date Collected:	04.28.2020 13:10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1130**	49.9	mg/kg	04.28.2020 20:15		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.29.2020 03:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	**691**	49.8	mg/kg	04.29.2020 03:08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**67.7**	49.8	mg/kg	04.29.2020 03:08		1
Total GRO-DRO	PHC628	**691**	49.8	mg/kg	04.29.2020 03:08		1
Total TPH	PHC635	**759**	49.8	mg/kg	04.29.2020 03:08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.29.2020 03:08	
o-Terphenyl	84-15-1	107	%	70-135	04.29.2020 03:08	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-003	Date Collected:	04.28.2020 13:10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.29.2020 02:29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.29.2020 02:29	U	1
Ethylbenzene	100-41-4	**0.0241**	0.00198	mg/kg	04.29.2020 02:29		1
m,p-Xylenes	179601-23-1	**0.0199**	0.00395	mg/kg	04.29.2020 02:29		1
o-Xylene	95-47-6	**0.00593**	0.00198	mg/kg	04.29.2020 02:29		1
Total Xylenes	1330-20-7	**0.0258**	0.00198	mg/kg	04.29.2020 02:29		1
Total BTEX		**0.0499**	0.00198	mg/kg	04.29.2020 02:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.29.2020 02:29	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.29.2020 02:29	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-004	Date Collected:	04.28.2020 13:15	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**875**	50.1	mg/kg	04.28.2020 20:32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.29.2020 03:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	**546**	50.1	mg/kg	04.29.2020 03:28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**62.6**	50.1	mg/kg	04.29.2020 03:28		1
Total GRO-DRO	PHC628	**546**	50.1	mg/kg	04.29.2020 03:28		1
Total TPH	PHC635	**609**	50.1	mg/kg	04.29.2020 03:28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.2020 03:28	
o-Terphenyl	84-15-1	108	%	70-135	04.29.2020 03:28	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-004	Date Collected:	04.28.2020 13:15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.29.2020 03:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.29.2020 03:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.29.2020 03:54	
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.29.2020 03:54	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-005	Date Collected:	04.28.2020 13:20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**109**	49.4	mg/kg	04.28.2020 20:37		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.29.2020 03:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	**93.5**	50.0	mg/kg	04.29.2020 03:49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.29.2020 03:49	U	1
Total GRO-DRO	PHC628	**93.5**	50.0	mg/kg	04.29.2020 03:49		1
Total TPH	PHC635	**93.5**	50.0	mg/kg	04.29.2020 03:49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.2020 03:49	
o-Terphenyl	84-15-1	110	%	70-135	04.29.2020 03:49	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-005	Date Collected:	04.28.2020 13:20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.29.2020 04:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.29.2020 04:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.29.2020 04:16	
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.29.2020 04:16	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-006	Date Collected:	04.28.2020 13:25	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**372**	50.1	mg/kg	04.28.2020 20:55		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.29.2020 04:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	**176**	50.0	mg/kg	04.29.2020 04:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.29.2020 04:29	U	1
Total GRO-DRO	PHC628	**176**	50.0	mg/kg	04.29.2020 04:29		1
Total TPH	PHC635	**176**	50.0	mg/kg	04.29.2020 04:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.29.2020 04:29	
o-Terphenyl	84-15-1	112	%	70-135	04.29.2020 04:29	

Certificate of Analytical Results 660037

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660037-006	Date Collected:	04.28.2020 13:25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.29.2020 04:37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.29.2020 04:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.29.2020 04:37	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.29.2020 04:37	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **ND** Not Detected.

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 660037

LT Environmental, Inc.

Ross Ranch 6 Fed 001H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3124455 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702278-1-BLK LCS Sample Id: 7702278-1-BKS LCSD Sample Id: 7702278-1-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	253	101	254	102	90-110	0	20	mg/kg	04.28.2020 18:46	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3124455 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660027-001 MS Sample Id: 660027-001 S MSD Sample Id: 660027-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.4	200	257	104	258	105	90-110	0	20	mg/kg	04.28.2020 19:02	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3124455 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660037-003 MS Sample Id: 660037-003 S MSD Sample Id: 660037-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	200	1330	100	1330	100	90-110	0	20	mg/kg	04.28.2020 20:21	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124494 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK LCS Sample Id: 7702304-1-BKS LCSD Sample Id: 7702304-1-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	937	94	70-135	4	35	mg/kg	04.28.2020 23:23	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1070	107	70-135	1	35	mg/kg	04.28.2020 23:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		127		131		70-135	%	04.28.2020 23:23
o-Terphenyl	123		122		128		70-135	%	04.28.2020 23:23

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124494 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.28.2020 23:03	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 660037

LT Environmental, Inc.

Ross Ranch 6 Fed 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124494 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 659919-037 MS Sample Id: 659919-037 S MSD Sample Id: 659919-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	879	88	905	90	70-135	3	35	mg/kg	04.29.2020 00:25	
Diesel Range Organics (DRO)	<50.0	1000	968	97	977	97	70-135	1	35	mg/kg	04.29.2020 00:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		112		70-135	%	04.29.2020 00:25
o-Terphenyl	119		111		70-135	%	04.29.2020 00:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702273-1-BLK LCS Sample Id: 7702273-1-BKS LCSD Sample Id: 7702273-1-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	0.110	110	0.117	117	70-130	6	35	mg/kg	04.28.2020 22:12	
Toluene	<0.00200	0.100	0.0984	98	0.106	106	70-130	7	35	mg/kg	04.28.2020 22:12	
Ethylbenzene	<0.00200	0.100	0.0929	93	0.0989	99	71-129	6	35	mg/kg	04.28.2020 22:12	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.193	97	70-135	6	35	mg/kg	04.28.2020 22:12	
o-Xylene	<0.00200	0.100	0.0932	93	0.0996	100	71-133	7	35	mg/kg	04.28.2020 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		108		112		70-130	%	04.28.2020 22:12
4-Bromofluorobenzene	108		98		100		70-130	%	04.28.2020 22:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660036-001 MS Sample Id: 660036-001 S MSD Sample Id: 660036-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.126	125	0.120	120	70-130	5	35	mg/kg	04.28.2020 22:55	
Toluene	<0.00202	0.101	0.113	112	0.105	105	70-130	7	35	mg/kg	04.28.2020 22:55	
Ethylbenzene	<0.00202	0.101	0.106	105	0.0982	98	71-129	8	35	mg/kg	04.28.2020 22:55	
m,p-Xylenes	<0.00404	0.202	0.206	102	0.191	96	70-135	8	35	mg/kg	04.28.2020 22:55	
o-Xylene	<0.00202	0.101	0.105	104	0.0989	99	71-133	6	35	mg/kg	04.28.2020 22:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	04.28.2020 22:55
4-Bromofluorobenzene	92		96		70-130	%	04.28.2020 22:55

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: 1060037

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc. Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	emoreno@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:	Ross Ranch 6 Fed 001H	Turn Around	
Project Number:	012920049	Routine	☒
Project Location	Eddy County	Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.0	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	6

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	FS01	S	4/28/20	1303	0.5'	1	X	X	X	
	FS02			1305						
	FS03			1310						
	FS04			1315						
	FS05			1320						
	FS06			1325						

ANALYSIS REQUEST

Preservative Codes

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

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

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
		4/28/20 16:28	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.28.2020 04.28.00 PM

Work Order #: 660037

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**	Samples received in bulk containers.
#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: 04.28.2020

Checklist reviewed by: Jessica Kramer Date: 04.29.2020

Jessica Kramer

Analytical Report 660346

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6Fed 001 H

012920049

05.01.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.01.2020

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

Reference: XENCO Report No(s): **660346**
Ross Ranch 6Fed 001 H
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 660346. 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. 660346 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 660346

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS07	S	04.30.2020 13:57	1.5 ft	660346-001
FS08	S	04.30.2020 14:00	1 ft	660346-002
FS09	S	04.30.2020 09:52	0.5 ft	660346-003
FS10	S	04.30.2020 09:57	0.5 ft	660346-004
FS11	S	04.30.2020 10:00	0.5 ft	660346-005
FS12	S	04.30.2020 10:02	0.5 ft	660346-006
FS13	S	04.30.2020 12:14	0.5 ft	660346-007
FS14	S	04.30.2020 12:16	0.5 ft	660346-008
FS15	S	04.30.2020 12:19	0.5 ft	660346-009
FS16	S	04.30.2020 12:21	0.5 ft	660346-010
FS17	S	04.30.2020 13:22	0.5 ft	660346-011
FS18	S	04.30.2020 13:24	0.5 ft	660346-012
FS19	S	04.30.2020 13:27	0.5 ft	660346-013
FS20	S	04.30.2020 14:20	1 ft	660346-014
FS21	S	04.30.2020 13:31	1.5 ft	660346-015
FS22	S	04.30.2020 13:34	1 ft	660346-016

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Ranch 6Fed 001 H

Project ID: *012920049*
Work Order Number(s): *660346*

Report Date: *05.01.2020*
Date Received: *04.30.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 660346

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6Fed 001 H

Project Id: 012920049
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu 04.30.2020 17:27
Report Date: 05.01.2020 12:22
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660346-001		660346-002		660346-003		660346-004		660346-005		660346-006	
	Field Id:	FS07		FS08		FS09		FS10		FS11		FS12	
	Depth:	1.5- ft		1- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020 13:57		04.30.2020 14:00		04.30.2020 09:52		04.30.2020 09:57		04.30.2020 10:00		04.30.2020 10:02	
BTEX by EPA 8021B	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30	
	Analyzed:	04.30.2020 20:45		04.30.2020 21:06		04.30.2020 20:23		04.30.2020 21:27		04.30.2020 21:49		04.30.2020 22:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.0377	0.0377	<0.0392	0.0392	<0.00400	0.00400	<0.00404	0.00404	<0.00397	0.00397	<0.00399	0.00399
o-Xylene		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.0189	0.0189	<0.0196	0.0196	<0.00200	0.00200	<0.00202	0.00202	<0.00198	0.00198	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48	
	Analyzed:	04.30.2020 20:32		04.30.2020 20:49		04.30.2020 20:54		04.30.2020 21:00		04.30.2020 21:06		04.30.2020 21:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		189	49.9	39.7	9.92	64.3	50.1	67.0	50.3	369	50.4	86.5	49.9
TPH by SW8015 Mod	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30	
	Analyzed:	04.30.2020 21:41		04.30.2020 22:02		04.30.2020 22:22		04.30.2020 22:42		04.30.2020 23:03		04.30.2020 23:43	
	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	<49.8	49.8	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.1	50.1
Diesel Range Organics (DRO)		257	50.2	187	49.8	129	49.8	84.1	49.9	214	50.2	52.8	50.1
Motor Oil Range Hydrocarbons (MRO)		84.3	50.2	<49.8	49.8	<49.8	49.8	<49.9	49.9	<50.2	50.2	<50.1	50.1
Total GRO-DRO		257	50.2	187	49.8	129	49.8	84.1	49.9	214	50.2	52.8	50.1
Total TPH		341	50.2	187	49.8	129	49.8	84.1	49.9	214	50.2	52.8	50.1

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 660346

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6Fed 001 H

Project Id: 012920049
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu 04.30.2020 17:27
Report Date: 05.01.2020 12:22
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660346-007		660346-008		660346-009		660346-010		660346-011		660346-012	
	Field Id:	FS13		FS14		FS15		FS16		FS17		FS18	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020 12:14		04.30.2020 12:16		04.30.2020 12:19		04.30.2020 12:21		04.30.2020 13:22		04.30.2020 13:24	
BTEX by EPA 8021B	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30	
	Analyzed:	04.30.2020 22:32		04.30.2020 22:53		04.30.2020 23:14		04.30.2020 23:36		05.01.2020 00:40		05.01.2020 01:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00229	0.00229	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
Toluene		<0.00229	0.00229	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
Ethylbenzene		0.0709	0.00917	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
m,p-Xylenes		0.0495	0.0183	<0.00402	0.00402	<0.00400	0.00400	<0.00401	0.00401	<0.00404	0.00404	<0.0392	0.0392
o-Xylene		0.0406	0.00917	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
Total Xylenes		0.0901	0.00917	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
Total BTEX		0.161	0.00229	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.0196	0.0196
Chloride by EPA 300	***Extracted:***	04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48	
	Analyzed:	04.30.2020 21:28		04.30.2020 21:34		04.30.2020 21:40		04.30.2020 21:45		04.30.2020 21:51		04.30.2020 22:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		358	49.9	43.5	9.98	93.2	10.1	75.4	9.90	105	9.96	124	9.92
TPH by SW8015 Mod	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30	
	Analyzed:	05.01.2020 00:04		05.01.2020 00:24		05.01.2020 00:44		05.01.2020 01:05		05.01.2020 01:25		05.01.2020 01:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		59.3	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		837	50.1	<50.3	50.3	69.5	50.1	<50.1	50.1	133	49.9	255	50.0
Motor Oil Range Hydrocarbons (MRO)		64.9	50.1	<50.3	50.3	<50.1	50.1	<50.1	50.1	<49.9	49.9	<50.0	50.0
Total GRO-DRO		896	50.1	<50.3	50.3	69.5	50.1	<50.1	50.1	133	49.9	255	50.0
Total TPH		961	50.1	<50.3	50.3	69.5	50.1	<50.1	50.1	133	49.9	255	50.0

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Jessica Kramer
Project Manager

Certificate of Analysis Summary 660346

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6Fed 001 H

Project Id: 012920049
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu 04.30.2020 17:27
Report Date: 05.01.2020 12:22
Project Manager: Jessica Kramer

Analysis Requested															
	Lab Id:	660346-013		660346-014		660346-015		660346-016							
	Field Id:	FS19		FS20		FS21		FS22							
	Depth:	0.5- ft		1- ft		1.5- ft		1- ft							
	Matrix:	SOIL		SOIL		SOIL		SOIL							
	Sampled:	04.30.2020 13:27		04.30.2020 14:20		04.30.2020 13:31		04.30.2020 13:34							
BTEX by EPA 8021B	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30							
	Analyzed:	05.01.2020 01:23		05.01.2020 01:44		05.01.2020 02:05		05.01.2020 02:27							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
Toluene		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
Ethylbenzene		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
m,p-Xylenes		<0.00399	0.00399	<0.0357	0.0357	<0.00402	0.00402	<0.00401	0.00401						
o-Xylene		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
Total Xylenes		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
Total BTEX		<0.00200	0.00200	<0.0179	0.0179	<0.00201	0.00201	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48		04.30.2020 17:48							
	Analyzed:	04.30.2020 22:14		04.30.2020 22:31		04.30.2020 22:36		04.30.2020 22:42							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Chloride		115	9.94	32.5	9.94	25.6	9.98	162	9.98						
TPH by SW8015 Mod	***Extracted:***	04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30		04.30.2020 17:30							
	Analyzed:	05.01.2020 02:06		05.01.2020 02:26		05.01.2020 02:46		04.30.2020 21:41							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.1	50.1						
Diesel Range Organics (DRO)		344	50.2	190	50.1	87.5	49.8	<50.1	50.1						
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.1	50.1	<49.8	49.8	<50.1	50.1						
Total GRO-DRO		344	50.2	190	50.1	87.5	49.8	<50.1	50.1						
Total TPH		344	50.2	190	50.1	87.5	49.8	<50.1	50.1						

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Jessica Kramer
Project Manager

Certificate of Analytical Results 660346

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-001	Date Collected:	04.30.2020 13:57	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**189**	49.9	mg/kg	04.30.2020 20:32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.30.2020 21:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	**257**	50.2	mg/kg	04.30.2020 21:41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**84.3**	50.2	mg/kg	04.30.2020 21:41		1
Total GRO-DRO	PHC628	**257**	50.2	mg/kg	04.30.2020 21:41		1
Total TPH	PHC635	**341**	50.2	mg/kg	04.30.2020 21:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.30.2020 21:41	
o-Terphenyl	84-15-1	107	%	70-135	04.30.2020 21:41	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-001	Date Collected:	04.30.2020 13:57	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1
Toluene	108-88-3	<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1
Ethylbenzene	100-41-4	<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1
m,p-Xylenes	179601-23-1	<0.0377	0.0377	mg/kg	04.30.2020 20:45	U	1
o-Xylene	95-47-6	<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1
Total Xylenes	1330-20-7	<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1
Total BTEX		<0.0189	0.0189	mg/kg	04.30.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.30.2020 20:45	
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.30.2020 20:45	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-002	Date Collected:	04.30.2020 14:00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.7**	9.92	mg/kg	04.30.2020 20:49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.30.2020 22:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**187**	49.8	mg/kg	04.30.2020 22:02		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.30.2020 22:02	U	1
Total GRO-DRO	PHC628	**187**	49.8	mg/kg	04.30.2020 22:02		1
Total TPH	PHC635	**187**	49.8	mg/kg	04.30.2020 22:02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.30.2020 22:02	
o-Terphenyl	84-15-1	113	%	70-135	04.30.2020 22:02	

Certificate of Analytical Results 660346

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-002	Date Collected:	04.30.2020 14:00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	04.30.2020 21:06	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1
Total BTEX		<0.0196	0.0196	mg/kg	04.30.2020 21:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.30.2020 21:06	
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.30.2020 21:06	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-003	Date Collected:	04.30.2020 09:52	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.3**	50.1	mg/kg	04.30.2020 20:54		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.30.2020 22:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**129**	49.8	mg/kg	04.30.2020 22:22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.30.2020 22:22	U	1
Total GRO-DRO	PHC628	**129**	49.8	mg/kg	04.30.2020 22:22		1
Total TPH	PHC635	**129**	49.8	mg/kg	04.30.2020 22:22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	04.30.2020 22:22	
o-Terphenyl	84-15-1	116	%	70-135	04.30.2020 22:22	

Certificate of Analytical Results 660346

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-003	Date Collected:	04.30.2020 09:52	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.2020 20:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.2020 20:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	04.30.2020 20:23	
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.30.2020 20:23	

Certificate of Analytical Results 660346

LT Environmental, Inc., Arvada, CO

Ross Ranch 6Fed 001 H

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-004	Date Collected:	04.30.2020 09:57	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**67.0**	50.3	mg/kg	04.30.2020 21:00		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.30.2020 22:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	**84.1**	49.9	mg/kg	04.30.2020 22:42		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.30.2020 22:42	U	1
Total GRO-DRO	PHC628	**84.1**	49.9	mg/kg	04.30.2020 22:42		1
Total TPH	PHC635	**84.1**	49.9	mg/kg	04.30.2020 22:42		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.30.2020 22:42	
o-Terphenyl	84-15-1	109	%	70-135	04.30.2020 22:42	

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-004	Date Collected:	04.30.2020 09:57	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.30.2020 21:27	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.30.2020 21:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.30.2020 21:27	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.30.2020 21:27	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-005	Date Collected:	04.30.2020 10:00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**369**	50.4	mg/kg	04.30.2020 21:06		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.30.2020 23:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	**214**	50.2	mg/kg	04.30.2020 23:03		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.30.2020 23:03	U	1
Total GRO-DRO	PHC628	**214**	50.2	mg/kg	04.30.2020 23:03		1
Total TPH	PHC635	**214**	50.2	mg/kg	04.30.2020 23:03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	04.30.2020 23:03	
o-Terphenyl	84-15-1	115	%	70-135	04.30.2020 23:03	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-005	Date Collected:	04.30.2020 10:00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.30.2020 21:49	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.30.2020 21:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.30.2020 21:49	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.2020 21:49	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-006	Date Collected:	04.30.2020 10:02	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**86.5**	49.9	mg/kg	04.30.2020 21:23		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.30.2020 23:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**52.8**	50.1	mg/kg	04.30.2020 23:43		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.30.2020 23:43	U	1
Total GRO-DRO	PHC628	**52.8**	50.1	mg/kg	04.30.2020 23:43		1
Total TPH	PHC635	**52.8**	50.1	mg/kg	04.30.2020 23:43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	04.30.2020 23:43	
o-Terphenyl	84-15-1	113	%	70-135	04.30.2020 23:43	

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-006	Date Collected:	04.30.2020 10:02	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.2020 22:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.2020 22:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	04.30.2020 22:10	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.30.2020 22:10	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-007	Date Collected:	04.30.2020 12:14	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**358**	49.9	mg/kg	04.30.2020 21:28		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**59.3**	50.1	mg/kg	05.01.2020 00:04		1
Diesel Range Organics (DRO)	C10C28DRO	**837**	50.1	mg/kg	05.01.2020 00:04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**64.9**	50.1	mg/kg	05.01.2020 00:04		1
Total GRO-DRO	PHC628	**896**	50.1	mg/kg	05.01.2020 00:04		1
Total TPH	PHC635	**961**	50.1	mg/kg	05.01.2020 00:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	05.01.2020 00:04	
o-Terphenyl	84-15-1	114	%	70-135	05.01.2020 00:04	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-007	Date Collected:	04.30.2020 12:14	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00229	0.00229	mg/kg	04.30.2020 22:32	U	1
Toluene	108-88-3	<0.00229	0.00229	mg/kg	04.30.2020 22:32	U	1
Ethylbenzene	100-41-4	**0.0709**	0.00917	mg/kg	04.30.2020 22:32		1
m,p-Xylenes	179601-23-1	**0.0495**	0.0183	mg/kg	04.30.2020 22:32		1
o-Xylene	95-47-6	**0.0406**	0.00917	mg/kg	04.30.2020 22:32		1
Total Xylenes	1330-20-7	**0.0901**	0.00917	mg/kg	04.30.2020 22:32		1
Total BTEX		**0.161**	0.00229	mg/kg	04.30.2020 22:32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.30.2020 22:32	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.30.2020 22:32	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-008	Date Collected:	04.30.2020 12:16	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**43.5**	9.98	mg/kg	04.30.2020 21:34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.01.2020 00:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.01.2020 00:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.01.2020 00:24	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.01.2020 00:24	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.01.2020 00:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.01.2020 00:24	
o-Terphenyl	84-15-1	112	%	70-135	05.01.2020 00:24	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-008	Date Collected:	04.30.2020 12:16	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.2020 22:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.2020 22:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.30.2020 22:53	
4-Bromofluorobenzene	460-00-4	129	%	70-130	04.30.2020 22:53	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-009	Date Collected:	04.30.2020 12:19	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**93.2**	10.1	mg/kg	04.30.2020 21:40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.01.2020 00:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	**69.5**	50.1	mg/kg	05.01.2020 00:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.01.2020 00:44	U	1
Total GRO-DRO	PHC628	**69.5**	50.1	mg/kg	05.01.2020 00:44		1
Total TPH	PHC635	**69.5**	50.1	mg/kg	05.01.2020 00:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	05.01.2020 00:44	
o-Terphenyl	84-15-1	101	%	70-135	05.01.2020 00:44	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-009	Date Collected:	04.30.2020 12:19	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.2020 23:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.2020 23:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.30.2020 23:14	
4-Bromofluorobenzene	460-00-4	110	%	70-130	04.30.2020 23:14	

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Sample Id:	**FS16**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-010	Date Collected:	04.30.2020 12:21	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**75.4**	9.90	mg/kg	04.30.2020 21:45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.01.2020 01:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.01.2020 01:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.01.2020 01:05	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.01.2020 01:05	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.01.2020 01:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.01.2020 01:05	
o-Terphenyl	84-15-1	105	%	70-135	05.01.2020 01:05	

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Sample Id:	**FS16**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-010	Date Collected:	04.30.2020 12:21	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.30.2020 23:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.2020 23:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.30.2020 23:36	
4-Bromofluorobenzene	460-00-4	111	%	70-130	04.30.2020 23:36	

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Sample Id:	**FS17**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-011	Date Collected:	04.30.2020 13:22	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**105**	9.96	mg/kg	04.30.2020 21:51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.01.2020 01:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**133**	49.9	mg/kg	05.01.2020 01:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.01.2020 01:25	U	1
Total GRO-DRO	PHC628	**133**	49.9	mg/kg	05.01.2020 01:25		1
Total TPH	PHC635	**133**	49.9	mg/kg	05.01.2020 01:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	05.01.2020 01:25	
o-Terphenyl	84-15-1	113	%	70-135	05.01.2020 01:25	

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Sample Id:	**FS17**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-011	Date Collected:	04.30.2020 13:22	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.01.2020 00:40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.01.2020 00:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.01.2020 00:40	
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.01.2020 00:40	

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Sample Id:	**FS18**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-012	Date Collected:	04.30.2020 13:24	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**124**	9.92	mg/kg	04.30.2020 22:08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.01.2020 01:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**255**	50.0	mg/kg	05.01.2020 01:46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.01.2020 01:46	U	1
Total GRO-DRO	PHC628	**255**	50.0	mg/kg	05.01.2020 01:46		1
Total TPH	PHC635	**255**	50.0	mg/kg	05.01.2020 01:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.01.2020 01:46	
o-Terphenyl	84-15-1	109	%	70-135	05.01.2020 01:46	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS18**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-012	Date Collected:	04.30.2020 13:24	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	05.01.2020 01:01	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1
Total BTEX		<0.0196	0.0196	mg/kg	05.01.2020 01:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	05.01.2020 01:01	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.01.2020 01:01	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS19**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-013	Date Collected:	04.30.2020 13:27	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	9.94	mg/kg	04.30.2020 22:14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.01.2020 02:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	**344**	50.2	mg/kg	05.01.2020 02:06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.01.2020 02:06	U	1
Total GRO-DRO	PHC628	**344**	50.2	mg/kg	05.01.2020 02:06		1
Total TPH	PHC635	**344**	50.2	mg/kg	05.01.2020 02:06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.01.2020 02:06	
o-Terphenyl	84-15-1	108	%	70-135	05.01.2020 02:06	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS19**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-013	Date Collected:	04.30.2020 13:27	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.01.2020 01:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.2020 01:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	05.01.2020 01:23	
1,4-Difluorobenzene	540-36-3	107	%	70-130	05.01.2020 01:23	

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Sample Id:	**FS20**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-014	Date Collected:	04.30.2020 14:20	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.5**	9.94	mg/kg	04.30.2020 22:31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.01.2020 02:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**190**	50.1	mg/kg	05.01.2020 02:26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.01.2020 02:26	U	1
Total GRO-DRO	PHC628	**190**	50.1	mg/kg	05.01.2020 02:26		1
Total TPH	PHC635	**190**	50.1	mg/kg	05.01.2020 02:26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.01.2020 02:26	
o-Terphenyl	84-15-1	107	%	70-135	05.01.2020 02:26	

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Sample Id:	**FS20**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-014	Date Collected:	04.30.2020 14:20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1
Toluene	108-88-3	<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1
Ethylbenzene	100-41-4	<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1
m,p-Xylenes	179601-23-1	<0.0357	0.0357	mg/kg	05.01.2020 01:44	U	1
o-Xylene	95-47-6	<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1
Total Xylenes	1330-20-7	<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1
Total BTEX		<0.0179	0.0179	mg/kg	05.01.2020 01:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.01.2020 01:44	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.01.2020 01:44	

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Sample Id:	**FS21**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-015	Date Collected:	04.30.2020 13:31	Sample Depth:	1.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**25.6**	9.98	mg/kg	04.30.2020 22:36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124745				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.01.2020 02:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**87.5**	49.8	mg/kg	05.01.2020 02:46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	05.01.2020 02:46	U	1
Total GRO-DRO	PHC628	**87.5**	49.8	mg/kg	05.01.2020 02:46		1
Total TPH	PHC635	**87.5**	49.8	mg/kg	05.01.2020 02:46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	05.01.2020 02:46	
o-Terphenyl	84-15-1	114	%	70-135	05.01.2020 02:46	

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Sample Id:	**FS21**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-015	Date Collected:	04.30.2020 13:31	Sample Depth:	1.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.01.2020 02:05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.01.2020 02:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.01.2020 02:05	
4-Bromofluorobenzene	460-00-4	113	%	70-130	05.01.2020 02:05	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS22**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-016	Date Collected:	04.30.2020 13:34	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:48	Basis:	Wet Weight
Seq Number:	3124742				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**162**	9.98	mg/kg	04.30.2020 22:42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124749				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.30.2020 21:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.30.2020 21:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.30.2020 21:41	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.30.2020 21:41	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.30.2020 21:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.30.2020 21:41	
o-Terphenyl	84-15-1	112	%	70-135	04.30.2020 21:41	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS22**	Matrix:	Soil	Date Received:	04.30.2020 17:27
Lab Sample Id:	660346-016	Date Collected:	04.30.2020 13:34	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 17:30	Basis:	Wet Weight
Seq Number:	3124718				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.01.2020 02:27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.2020 02:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	05.01.2020 02:27	
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.01.2020 02:27	

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. **ND** Not Detected.

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 660346

LT Environmental, Inc.

Ross Ranch 6Fed 001 H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124742 — Matrix: Solid — Date Prep: 04.30.2020
MB Sample Id: 7702475-1-BLK — LCS Sample Id: 7702475-1-BKS — LCSD Sample Id: 7702475-1-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	257	103	257	103	90-110	0	20	mg/kg	04.30.2020 20:20	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124742 — Matrix: Soil — Date Prep: 04.30.2020
Parent Sample Id: 660346-001 — MS Sample Id: 660346-001 S — MSD Sample Id: 660346-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	189	200	393	102	391	101	90-110	1	20	mg/kg	04.30.2020 20:37	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124742 — Matrix: Soil — Date Prep: 04.30.2020
Parent Sample Id: 660346-011 — MS Sample Id: 660346-011 S — MSD Sample Id: 660346-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	105	200	317	106	308	102	90-110	3	20	mg/kg	04.30.2020 21:57	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124745 — Matrix: Solid — Date Prep: 04.30.2020
MB Sample Id: 7702485-1-BLK — LCS Sample Id: 7702485-1-BKS — LCSD Sample Id: 7702485-1-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	1090	109	857	86	70-135	24	35	mg/kg	04.30.2020 12:30	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	961	96	70-135	15	35	mg/kg	04.30.2020 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		127		111		70-135	%	04.30.2020 12:30
o-Terphenyl	101		120		108		70-135	%	04.30.2020 12:30

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124749 — Matrix: Solid — Date Prep: 04.30.2020
MB Sample Id: 7702481-1-BLK — LCS Sample Id: 7702481-1-BKS — LCSD Sample Id: 7702481-1-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	951	95	839	84	70-135	13	35	mg/kg	04.30.2020 12:30	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	921	92	70-135	15	35	mg/kg	04.30.2020 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		123		120		70-135	%	04.30.2020 12:30
o-Terphenyl	109		122		106		70-135	%	04.30.2020 12:30

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 660346

LT Environmental, Inc.

Ross Ranch 6Fed 001 H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124745 Matrix: Solid Date Prep: 04.30.2020
MB Sample Id: 7702485-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.30.2020 12:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124749 Matrix: Solid Date Prep: 04.30.2020
MB Sample Id: 7702481-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.30.2020 12:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124745 Matrix: Soil Date Prep: 04.30.2020
Parent Sample Id: 660344-001 MS Sample Id: 660344-001 S MSD Sample Id: 660344-001 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)	<50.3	1010	916	91	928	93	70-135	1	35	mg/kg	04.30.2020 19:38	
Diesel Range Organics (DRO)	<50.3	1010	1020	101	1040	104	70-135	2	35	mg/kg	04.30.2020 19:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		118		70-135	%	04.30.2020 19:38
o-Terphenyl	115		118		70-135	%	04.30.2020 19:38

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124749 Matrix: Soil Date Prep: 04.30.2020
Parent Sample Id: 660344-002 MS Sample Id: 660344-002 S MSD Sample Id: 660344-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	888	89	888	89	70-135	0	35	mg/kg	04.30.2020 19:38	
Diesel Range Organics (DRO)	<49.8	995	1000	101	1000	100	70-135	0	35	mg/kg	04.30.2020 19:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		109		70-135	%	04.30.2020 19:38
o-Terphenyl	115		114		70-135	%	04.30.2020 19:38

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 660346

LT Environmental, Inc.

Ross Ranch 6Fed 001 H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124718 Matrix: Solid Date Prep: 04.30.2020
MB Sample Id: 7702473-1-BLK LCS Sample Id: 7702473-1-BKS LCSD Sample Id: 7702473-1-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	0.0978	98	0.106	106	70-130	8	35	mg/kg	04.30.2020 18:36	
Toluene	<0.00200	0.100	0.0899	90	0.0974	97	70-130	8	35	mg/kg	04.30.2020 18:36	
Ethylbenzene	<0.00200	0.100	0.0829	83	0.0909	91	71-129	9	35	mg/kg	04.30.2020 18:36	
m,p-Xylenes	<0.00400	0.200	0.164	82	0.178	89	70-135	8	35	mg/kg	04.30.2020 18:36	
o-Xylene	<0.00200	0.100	0.0880	88	0.0951	95	71-133	8	35	mg/kg	04.30.2020 18:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		110		108		70-130	%	04.30.2020 18:36
4-Bromofluorobenzene	102		101		97		70-130	%	04.30.2020 18:36

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124718 Matrix: Soil Date Prep: 04.30.2020
Parent Sample Id: 660346-003 MS Sample Id: 660346-003 S MSD Sample Id: 660346-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.105	104	0.104	104	70-130	1	35	mg/kg	04.30.2020 19:19	
Toluene	<0.00202	0.101	0.0947	94	0.0956	96	70-130	1	35	mg/kg	04.30.2020 19:19	
Ethylbenzene	<0.00202	0.101	0.0865	86	0.0868	87	71-129	0	35	mg/kg	04.30.2020 19:19	
m,p-Xylenes	<0.00403	0.202	0.166	82	0.168	84	70-135	1	35	mg/kg	04.30.2020 19:19	
o-Xylene	<0.00202	0.101	0.0836	83	0.0843	84	71-133	1	35	mg/kg	04.30.2020 19:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		107		70-130	%	04.30.2020 19:19
4-Bromofluorobenzene	100		107		70-130	%	04.30.2020 19:19

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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

Chain of Custody

Work Order No: 1e1e0324

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	emoreno@ltenv.com

Work Order Comments

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

Project Name:	Ross Ranch 6 Fed 001H	Turn Around	
Project Number:	012920049	Routine	☒
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.8	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:	16

ANALYSIS REQUEST

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 8021)	Chloride (EPA 300.0)	Sample Comments
FS07	S	4/30/20	1357	1.5'	1	X	X	X	Rush: 24 hrs
FS08			1400	1'					
FS09			0952	0.5					
FS10			0957						
FS11			1000						
FS12			1002						Rush: 24 hrs
FS13			1214						
FS14			1216						
FS15			1219						
FS16			1221						

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		4/30/20 17:27	2		
3			4		
5			6		

Chain of Custody

Work Order No: 6e603416

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849 Email:	emoreno@ltenv.com	

Work Order Comments

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

Project Name:	Ross Ranch 6 Fed 001H	Turn Around	
Project Number:	012920049	Routine	☒
P.O. Number:	Eddy County	Rush:	
Sampler's Name:	Ezequiel Moreno	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:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
FS17	S	4/30/20	1322	0.5	1	X	X	X	
FS18			1324	0.5					Rush: 24 hrs
FS19			1327	0.5					
FS20			1420	1					Rush: 24 hrs
FS21			1331	1.5					
FS22			1334	1					

ANALYSIS REQUEST

Work Order Notes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/30/20 17:27	2		
3			4		
5			6		

Certificate of Analysis Summary 660708

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Fed 001H

Project Id: 012920049
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 05.05.2020 17:02
Report Date: 05.07.2020 15:34
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660708-001		660708-002		660708-003		660708-004		660708-005		660708-006	
	Field Id:	FS23		FS24		FS25		FS26		FS27		SW01	
	Depth:	1- ft		1- ft		0.5- ft		1- ft		0.5- ft		0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.04.2020 10:17		05.04.2020 10:29		05.04.2020 10:45		05.04.2020 11:06		05.04.2020 11:30		05.04.2020 13:50	
BTEX by EPA 8021B	***Extracted:***	05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00	
	Analyzed:	05.07.2020 02:19		05.07.2020 02:40		05.07.2020 03:02		05.07.2020 03:23		05.07.2020 03:44		05.07.2020 04:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	0.00751	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	0.0104	0.00397	<0.00399	0.00399	<0.00402	0.00402	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	0.00939	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	0.0198	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	0.0273	0.00198	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00	
	Analyzed:	05.06.2020 12:34		05.06.2020 12:40		05.06.2020 12:46		05.06.2020 12:51		05.06.2020 13:09		05.06.2020 13:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		198	10.1	42.8	9.94	4140	100	2190	99.8	6570	99.8	653	99.6
TPH by SW8015 Mod	***Extracted:***	05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00	
	Analyzed:	05.06.2020 17:53		05.06.2020 18:14		05.06.2020 18:34		05.06.2020 18:54		05.06.2020 19:15		05.06.2020 19:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.1	50.1
Diesel Range Organics (DRO)		185	50.1	231	49.8	<50.2	50.2	<50.2	50.2	<50.1	50.1	412	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.1	50.1
Total GRO-DRO		185	50.1	231	49.8	<50.2	50.2	<50.2	50.2	<50.1	50.1	412	50.1
Total TPH		185	50.1	231	49.8	<50.2	50.2	<50.2	50.2	<50.1	50.1	412	50.1

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 660708

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Fed 001H

Project Id: 012920049
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 05.05.2020 17:02
Report Date: 05.07.2020 15:34
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660708-007		660708-008		660708-009		660708-010		660708-011		660708-012	
	Field Id:	SW03		SW04		SW05		SW06		SW07		SW08	
	Depth:	0-1 ft		0-1 ft		0-1 ft		0-1 ft		0-0.5 ft		0-0.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	05.04.2020 14:10		05.04.2020 14:20		05.04.2020 14:25		05.04.2020 14:35		05.04.2020 14:40		05.04.2020 14:50	
BTEX by EPA 8021B	***Extracted:***	05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00	
	Analyzed:	05.07.2020 04:27		05.07.2020 04:49		05.07.2020 05:10		05.07.2020 05:31		05.07.2020 06:36		05.07.2020 06:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00401	0.00401	<0.00400	0.00400	<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00		05.06.2020 10:00	
	Analyzed:	05.06.2020 15:10		05.06.2020 13:26		05.06.2020 13:32		05.06.2020 13:37		05.06.2020 13:55		05.06.2020 14:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		61.7	9.94	288	99.8	146	10.0	36.4	9.96	65.5	9.94	358	10.0
TPH by SW8015 Mod	***Extracted:***	05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00		05.06.2020 17:00	
	Analyzed:	05.06.2020 19:55		05.06.2020 20:15		05.06.2020 20:36		05.06.2020 21:16		05.06.2020 21:36		05.06.2020 21:57	
	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	<49.9	49.9	<50.2	50.2	<50.3	50.3	<50.0	50.0	<50.1	50.1
Diesel Range Organics (DRO)		465	50.2	170	49.9	658	50.2	<50.3	50.3	96.5	50.0	525	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<49.9	49.9	71.7	50.2	<50.3	50.3	<50.0	50.0	<50.1	50.1
Total GRO-DRO		465	50.2	170	49.9	658	50.2	<50.3	50.3	96.5	50.0	525	50.1
Total TPH		465	50.2	170	49.9	730	50.2	<50.3	50.3	96.5	50.0	525	50.1

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

Jessica Kramer
Project Manager

Analytical Report 660708

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6 Fed 001H

012920049

05.07.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.07.2020

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

Reference: XENCO Report No(s): **660708**
Ross Ranch 6 Fed 001H
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) 660708. 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. 660708 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 660708

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS23	S	05.04.2020 10:17	1 ft	660708-001
FS24	S	05.04.2020 10:29	1 ft	660708-002
FS25	S	05.04.2020 10:45	0.5 ft	660708-003
FS26	S	05.04.2020 11:06	1 ft	660708-004
FS27	S	05.04.2020 11:30	0.5 ft	660708-005
SW01	S	05.04.2020 13:50	0 - 0.5 ft	660708-006
SW03	S	05.04.2020 14:10	0 - 1 ft	660708-007
SW04	S	05.04.2020 14:20	0 - 1 ft	660708-008
SW05	S	05.04.2020 14:25	0 - 1 ft	660708-009
SW06	S	05.04.2020 14:35	0 - 1 ft	660708-010
SW07	S	05.04.2020 14:40	0 - 0.5 ft	660708-011
SW08	S	05.04.2020 14:50	0 - 0.5 ft	660708-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Ross Ranch 6 Fed 001H

Project ID: *012920049*
Work Order Number(s): *660708*

Report Date: *05.07.2020*
Date Received: *05.05.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 660708

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS23**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-001	Date Collected:	05.04.2020 10:17	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**198**	10.1	mg/kg	05.06.2020 12:34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 17:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	**185**	50.1	mg/kg	05.06.2020 17:53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 17:53	U	1
Total GRO-DRO	PHC628	**185**	50.1	mg/kg	05.06.2020 17:53		1
Total TPH	PHC635	**185**	50.1	mg/kg	05.06.2020 17:53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	05.06.2020 17:53	
o-Terphenyl	84-15-1	127	%	70-135	05.06.2020 17:53	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS23**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-001	Date Collected:	05.04.2020 10:17	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.07.2020 02:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 02:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.07.2020 02:19	
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.07.2020 02:19	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS24**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-002	Date Collected:	05.04.2020 10:29	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.8**	9.94	mg/kg	05.06.2020 12:40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.06.2020 18:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**231**	49.8	mg/kg	05.06.2020 18:14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	05.06.2020 18:14	U	1
Total GRO-DRO	PHC628	**231**	49.8	mg/kg	05.06.2020 18:14		1
Total TPH	PHC635	**231**	49.8	mg/kg	05.06.2020 18:14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	05.06.2020 18:14	
o-Terphenyl	84-15-1	128	%	70-135	05.06.2020 18:14	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS24**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-002	Date Collected:	05.04.2020 10:29	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.07.2020 02:40	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.07.2020 02:40	U	1
Ethylbenzene	100-41-4	**0.00751**	0.00198	mg/kg	05.07.2020 02:40		1
m,p-Xylenes	179601-23-1	**0.0104**	0.00397	mg/kg	05.07.2020 02:40		1
o-Xylene	95-47-6	**0.00939**	0.00198	mg/kg	05.07.2020 02:40		1
Total Xylenes	1330-20-7	**0.0198**	0.00198	mg/kg	05.07.2020 02:40		1
Total BTEX		**0.0273**	0.00198	mg/kg	05.07.2020 02:40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.07.2020 02:40	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.07.2020 02:40	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS25**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-003	Date Collected:	05.04.2020 10:45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4140**	100	mg/kg	05.06.2020 12:46		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 18:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.06.2020 18:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.06.2020 18:34	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.06.2020 18:34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.06.2020 18:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	05.06.2020 18:34	
o-Terphenyl	84-15-1	129	%	70-135	05.06.2020 18:34	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS25**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-003	Date Collected:	05.04.2020 10:45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.07.2020 03:02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 03:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.07.2020 03:02	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.07.2020 03:02	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS26**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-004	Date Collected:	05.04.2020 11:06	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2190**	99.8	mg/kg	05.06.2020 12:51		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 18:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.06.2020 18:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.06.2020 18:54	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.06.2020 18:54	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.06.2020 18:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	05.06.2020 18:54	
o-Terphenyl	84-15-1	118	%	70-135	05.06.2020 18:54	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS26**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-004	Date Collected:	05.04.2020 11:06	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.07.2020 03:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.07.2020 03:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	05.07.2020 03:23	
1,4-Difluorobenzene	540-36-3	112	%	70-130	05.07.2020 03:23	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**FS27**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-005	Date Collected:	05.04.2020 11:30	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6570**	99.8	mg/kg	05.06.2020 13:09		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 19:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.06.2020 19:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 19:15	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.06.2020 19:15	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.06.2020 19:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	05.06.2020 19:15	
o-Terphenyl	84-15-1	119	%	70-135	05.06.2020 19:15	

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Sample Id:	**FS27**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-005	Date Collected:	05.04.2020 11:30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.07.2020 03:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 03:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	05.07.2020 03:44	
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.07.2020 03:44	

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Ross Ranch 6 Fed 001H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-006	Date Collected:	05.04.2020 13:50	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**653**	99.6	mg/kg	05.06.2020 13:14		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 19:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	**412**	50.1	mg/kg	05.06.2020 19:35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 19:35	U	1
Total GRO-DRO	PHC628	**412**	50.1	mg/kg	05.06.2020 19:35		1
Total TPH	PHC635	**412**	50.1	mg/kg	05.06.2020 19:35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.06.2020 19:35	
o-Terphenyl	84-15-1	122	%	70-135	05.06.2020 19:35	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-006	Date Collected:	05.04.2020 13:50	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.07.2020 04:06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 04:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.07.2020 04:06	
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.07.2020 04:06	

Certificate of Analytical Results 660708

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-007	Date Collected:	05.04.2020 14:10	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**61.7**	9.94	mg/kg	05.06.2020 15:10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 19:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	**465**	50.2	mg/kg	05.06.2020 19:55		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.06.2020 19:55	U	1
Total GRO-DRO	PHC628	**465**	50.2	mg/kg	05.06.2020 19:55		1
Total TPH	PHC635	**465**	50.2	mg/kg	05.06.2020 19:55		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	05.06.2020 19:55	
o-Terphenyl	84-15-1	131	%	70-135	05.06.2020 19:55	

Certificate of Analytical Results 660708

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-007	Date Collected:	05.04.2020 14:10	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.07.2020 04:27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 04:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	05.07.2020 04:27	
4-Bromofluorobenzene	460-00-4	111	%	70-130	05.07.2020 04:27	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-008	Date Collected:	05.04.2020 14:20	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**288**	99.8	mg/kg	05.06.2020 13:26		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.06.2020 20:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**170**	49.9	mg/kg	05.06.2020 20:15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.06.2020 20:15	U	1
Total GRO-DRO	PHC628	**170**	49.9	mg/kg	05.06.2020 20:15		1
Total TPH	PHC635	**170**	49.9	mg/kg	05.06.2020 20:15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.06.2020 20:15	
o-Terphenyl	84-15-1	123	%	70-135	05.06.2020 20:15	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-008	Date Collected:	05.04.2020 14:20	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.07.2020 04:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 04:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.07.2020 04:49	
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.07.2020 04:49	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-009	Date Collected:	05.04.2020 14:25	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**146**	10.0	mg/kg	05.06.2020 13:32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 20:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**658**	50.2	mg/kg	05.06.2020 20:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**71.7**	50.2	mg/kg	05.06.2020 20:36		1
Total GRO-DRO	PHC628	**658**	50.2	mg/kg	05.06.2020 20:36		1
Total TPH	PHC635	**730**	50.2	mg/kg	05.06.2020 20:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.06.2020 20:36	
o-Terphenyl	84-15-1	123	%	70-135	05.06.2020 20:36	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-009	Date Collected:	05.04.2020 14:25	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.07.2020 05:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 05:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	05.07.2020 05:10	
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.07.2020 05:10	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-010	Date Collected:	05.04.2020 14:35	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.4**	9.96	mg/kg	05.06.2020 13:37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.06.2020 21:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.06.2020 21:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.06.2020 21:16	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.06.2020 21:16	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.06.2020 21:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.06.2020 21:16	
o-Terphenyl	84-15-1	122	%	70-135	05.06.2020 21:16	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-010	Date Collected:	05.04.2020 14:35	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.07.2020 05:31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.07.2020 05:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	05.07.2020 05:31	
1,4-Difluorobenzene	540-36-3	116	%	70-130	05.07.2020 05:31	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-011	Date Collected:	05.04.2020 14:40	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.5**	9.94	mg/kg	05.06.2020 13:55		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.06.2020 21:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**96.5**	50.0	mg/kg	05.06.2020 21:36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.06.2020 21:36	U	1
Total GRO-DRO	PHC628	**96.5**	50.0	mg/kg	05.06.2020 21:36		1
Total TPH	PHC635	**96.5**	50.0	mg/kg	05.06.2020 21:36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	05.06.2020 21:36	
o-Terphenyl	84-15-1	123	%	70-135	05.06.2020 21:36	

Certificate of Analytical Results 660708

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-011	Date Collected:	05.04.2020 14:40	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.07.2020 06:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 06:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	70-130	05.07.2020 06:36	
4-Bromofluorobenzene	460-00-4	92	%	70-130	05.07.2020 06:36	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-012	Date Collected:	05.04.2020 14:50	Sample Depth:	0 - 0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 10:00	Basis:	Wet Weight
Seq Number:	3125245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**358**	10.0	mg/kg	05.06.2020 14:01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 21:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**525**	50.1	mg/kg	05.06.2020 21:57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 21:57	U	1
Total GRO-DRO	PHC628	**525**	50.1	mg/kg	05.06.2020 21:57		1
Total TPH	PHC635	**525**	50.1	mg/kg	05.06.2020 21:57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	05.06.2020 21:57	
o-Terphenyl	84-15-1	125	%	70-135	05.06.2020 21:57	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 001H

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	05.05.2020 17:02
Lab Sample Id:	660708-012	Date Collected:	05.04.2020 14:50	Sample Depth:	0 - 0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.06.2020 17:00	Basis:	Wet Weight
Seq Number:	3125297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.07.2020 06:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.07.2020 06:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.07.2020 06:57	
1,4-Difluorobenzene	540-36-3	107	%	70-130	05.07.2020 06:57	

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. **ND** Not Detected.

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 660708

LT Environmental, Inc.

Ross Ranch 6 Fed 001H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125245 — Matrix: Solid — Date Prep: 05.06.2020
MB Sample Id: 7702826-1-BLK — LCS Sample Id: 7702826-1-BKS — LCSD Sample Id: 7702826-1-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	252	101	250	100	90-110	1	20	mg/kg	05.06.2020 12:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125245 — Matrix: Soil — Date Prep: 05.06.2020
Parent Sample Id: 660685-004 — MS Sample Id: 660685-004 S — MSD Sample Id: 660685-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	464	200	658	97	655	96	90-110	0	20	mg/kg	05.06.2020 12:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125245 — Matrix: Soil — Date Prep: 05.06.2020
Parent Sample Id: 660708-010 — MS Sample Id: 660708-010 S — MSD Sample Id: 660708-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	36.4	200	234	99	234	99	90-110	0	20	mg/kg	05.06.2020 13:43	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125293 — Matrix: Solid — Date Prep: 05.06.2020
MB Sample Id: 7702869-1-BLK — LCS Sample Id: 7702869-1-BKS — LCSD Sample Id: 7702869-1-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	1160	116	1120	112	70-135	4	35	mg/kg	05.06.2020 16:11	
Diesel Range Organics (DRO)	<50.0	1000	1250	125	1210	121	70-135	3	35	mg/kg	05.06.2020 16:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		135		132		70-135	%	05.06.2020 16:11
o-Terphenyl	119		120		118		70-135	%	05.06.2020 16:11

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125293 — Matrix: Solid — Date Prep: 05.06.2020
MB Sample Id: 7702869-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.06.2020 15:51	

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 660708

LT Environmental, Inc.

Ross Ranch 6 Fed 001H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3125293 Matrix: Soil Date Prep: 05.06.2020
Parent Sample Id: 660732-001 MS Sample Id: 660732-001 S MSD Sample Id: 660732-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1150	115	1130	114	70-135	2	35	mg/kg	05.06.2020 17:12	
Diesel Range Organics (DRO)	<50.0	1000	1160	116	1170	118	70-135	1	35	mg/kg	05.06.2020 17:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	135		133		70-135	%	05.06.2020 17:12
o-Terphenyl	117		117		70-135	%	05.06.2020 17:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125297 Matrix: Solid Date Prep: 05.06.2020
MB Sample Id: 7702857-1-BLK LCS Sample Id: 7702857-1-BKS LCSD Sample Id: 7702857-1-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	0.118	118	0.117	117	70-130	1	35	mg/kg	05.07.2020 00:32	
Toluene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	05.07.2020 00:32	
Ethylbenzene	<0.00200	0.100	0.0994	99	0.0983	98	71-129	1	35	mg/kg	05.07.2020 00:32	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.191	96	70-135	1	35	mg/kg	05.07.2020 00:32	
o-Xylene	<0.00200	0.100	0.101	101	0.0988	99	71-133	2	35	mg/kg	05.07.2020 00:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		109		109		70-130	%	05.07.2020 00:32
4-Bromofluorobenzene	106		100		99		70-130	%	05.07.2020 00:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125297 Matrix: Soil Date Prep: 05.06.2020
Parent Sample Id: 660708-001 MS Sample Id: 660708-001 S MSD Sample Id: 660708-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.120	121	0.117	118	70-130	3	35	mg/kg	05.07.2020 10:10	
Toluene	<0.00199	0.0994	0.108	109	0.106	107	70-130	2	35	mg/kg	05.07.2020 10:10	
Ethylbenzene	<0.00199	0.0994	0.101	102	0.0984	99	71-129	3	35	mg/kg	05.07.2020 10:10	
m,p-Xylenes	<0.00398	0.199	0.195	98	0.191	96	70-135	2	35	mg/kg	05.07.2020 10:10	
o-Xylene	<0.00199	0.0994	0.100	101	0.0984	99	71-133	2	35	mg/kg	05.07.2020 10:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		70-130	%	05.07.2020 10:10
4-Bromofluorobenzene	98		100		70-130	%	05.07.2020 10:10

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

Chain of Custody

Work Order No: 660708

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	emoreno@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Ross Ranch 6 Fed 001H	Turn Around	
Project Number:	012920049	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	4.0	Thermometer ID		
Received Intact:	(Yes) No		THM007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	12	

ANALYSIS REQUEST

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
FS23	S	05/04/20	1017	1'	1	X	X	X	
FS24			1029	1'					
FS25			1045	0.5'					
FS26			1106	1'					
FS27			1130	0.5'					
SW01			1350	0-0.5					
SW03			1410	0-1					
SW04			1420	0-1					
SW05			1425	0-1					
SW06			1435	0-1					

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		5/5/20 17:02	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Chain of Custody

Work Order No: 20E0708

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

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	emoreno@ltenv.com, dmoir@ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ uperfund ☐
State of Project:
Reporting:Level II ☐ evel III ☐ ST/UST ☐ RRP ☐ evel IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Ranch 6 Fed 001H	Turn Around	
Project Number:	012920049	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	

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

ANALYSIS REQUEST

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
SW07	S	5/14/20	1440	0-0.5	1	X	X	X	
SW08	S	5/14/20	1450	0-0.5	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		5/5/20 17:02	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1