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	NAB1917140472
District RP	2RP-5491
Facility ID	
Application ID	pAB1917137076

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)* NAB1917140472
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.065107° Longitude -103.918406°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Ranch 6 Federal #001H Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 6/2/2019	API# *(if applicable)* 30-015-36883

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

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.26	Volume Recovered (bbls) 0.25
☒ Produced Water	Volume Released (bbls) 25.62	Volume Recovered (bbls) 24.75
	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)
☐ [illegible]	ıme Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Lease operator reported a release of fluids from the heater treater into earthen containment and onto facility pad due to a worn fire tube gasket. The vessel was isolated and a vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

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

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Amy Ruth to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos and Deborah McKinney (BLM) on 6/3/2019 by 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:
N/A

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

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

Printed Name: Amy C. Ruth Title: SH&E Coordinator

Signature:  Date: 6/14/2019

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

OCD Only

Received by: Amalia Bustamante Date: 6/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
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Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __09/27/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
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

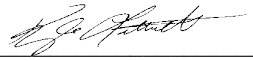
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ 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: 09/27/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

September 27, 2019

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

RE: Closure Request
Ross Ranch 6 Federal #001H Battery
Remediation Permit Number 2RP-5491
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing the site assessment and delineation soil sampling activities at the Ross Ranch 6 Federal #001H Battery (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 and delineation soil sampling activities was to address impacts to soil following the release of crude oil and produced water at the Site. Based on the results of the soil sampling and delineation activities, XTO is submitting this Closure Request, describing remediation that has occurred and requesting no further action for this release.

RELEASE BACKGROUND

On June 2, 2019, a gasket on the heater-treater failed and approximately 0.26 barrels (bbls) of crude oil and 25.62 bbls of produced water were released within the earthen containment berm and onto the caliche well pad. The vessel was isolated, and a vacuum truck was dispatched to the Site to recover free-standing fluids; approximately 0.25 bbls of crude oil and 24.75 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 14, 2019, and was assigned Remediation Permit (RP) Number 2RP-5491 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well is C 01360, located approximately 2,965 feet east of the Site. The water well has a depth to groundwater of 173 feet and a total depth of 770 feet. Ground surface elevation at the water well location is 3,097 feet above mean sea level (AMSL), which is approximately 1 foot lower in elevation than

the Site. The closest continuously flowing water or significant watercourse to the Site is a seasonal streambed located approximately 980 feet west of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a medium potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

On June 7, 2019, LTE personnel inspected the Site to evaluate the release extent. Surficial staining was observed in the release area within the earthen containment berm and on the caliche well pad north of the berm. LTE personnel collected two preliminary soil samples (SS01 and SS02) within the release extent from a depth of approximately 0.5 feet bgs to assess for soil impacts. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing 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 Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that benzene, BTEX, GRO and DRO, and TPH concentrations were compliant with the Closure Criteria and no excavation was required. However, based on visible surface staining and laboratory analytical results indicating elevated chloride concentrations, surface soil scraping and delineation activities were scheduled. Laboratory analytical results for the preliminary soil samples are

presented on Figure 2 and summarized in Table 1. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

On August 30 and September 4, 2019, LTE personnel returned to the Site to oversee surface soil scraping and delineation activities as indicated by visible surface staining and laboratory analytical results for the preliminary soil samples. Surface soil was scraped from the northern portion of the release area to a depth of approximately 2 inches to remove the stained soil. Potholes were advanced via backhoe at four locations within and around the release extent to further assess for potential soil impacts. Potholes PH01 through PH04 were advanced to a depth of 4 feet bgs. Delineation soil samples were collected from depths of 2 feet and 4 feet bgs in each pothole. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil samples were collected, handled and analyzed as described above at Xenco in Midland, Texas. The potholes, delineation soil sample locations, and approximate scraped area are depicted on Figure 3.

The surface scraped area measured approximately 1,300 square feet in area. A total of approximately 2 cubic yards of soil were removed from the release area. The soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01 and SS02 indicated that benzene, BTEX, GRO and DRO, and TPH concentrations were compliant with the Closure Criteria; however, the chloride concentrations ranged from 5,640 milligrams per kilograms (mg/kg) to 11,100 mg/kg. Based on the elevated chloride concentrations, impacted surface soil was scraped via backhoe and potholes were advanced in and around the release area to assess for potential soil impacts. Laboratory analytical results for the delineation soil samples collected from potholes PH01 through PH04 indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Preliminary and delineation soil samples were collected within and around the release extent to assess for soil impacts as a result of the June 2, 2019, release event. Laboratory analytical results for the preliminary soil samples indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria; however, the chloride concentrations were elevated. The top 2 inches of soil in the release area was scraped via backhoe to address

the elevated chloride concentrations and surface staining. A total of approximately 2 cubic yards of soil were removed from the release area. Delineation soil sampling was completed in and around the release extent. Laboratory analytical results for the delineation soil samples indicated that benzene, BTEX, GRO and DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and no further remediation was required.

Initial response efforts and removal of surficial stained soil have mitigated impacts at this Site. XTO requests no further action for RP Number 2RP-5491. An updated Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Analytical Reports
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5491)
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sample Logs
Attachment 4	Laboratory Analytical Reports

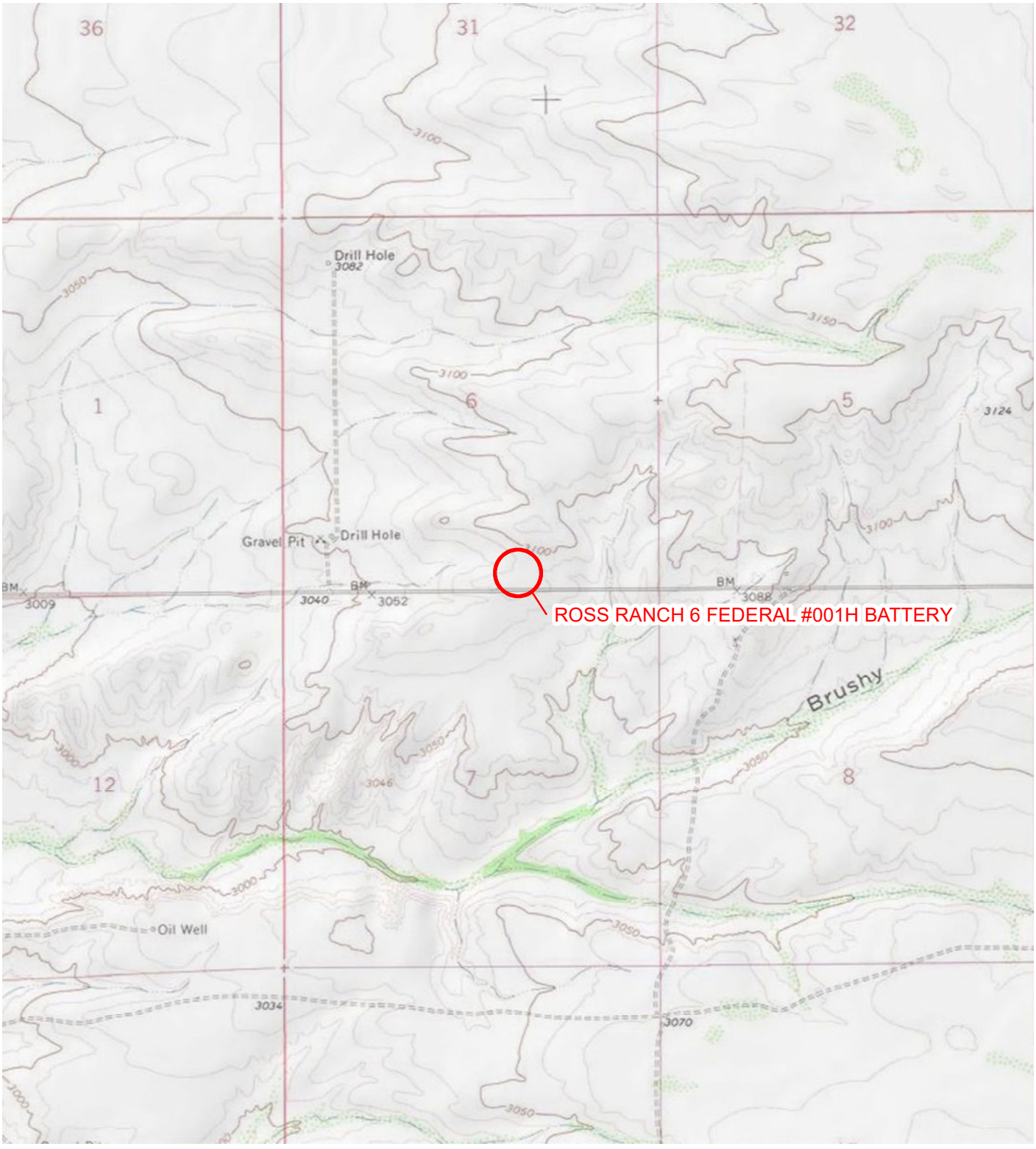


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

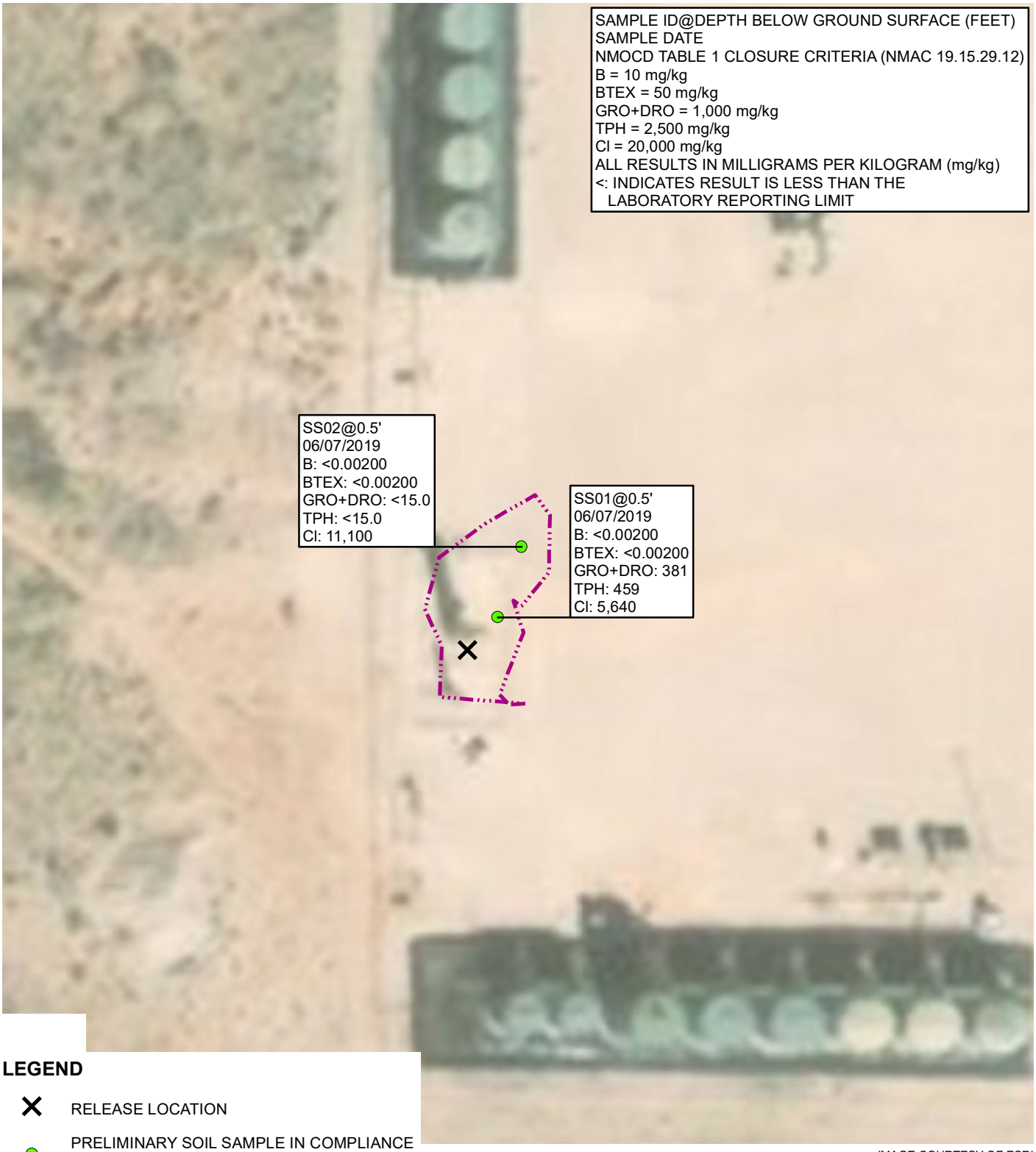
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5491

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

P:\XTO Energy\GIS\MXD\012919118_ROSS RANCH 6 FEDERAL #001\012919118_FIG01_SL_5491.mxd



LEGEND

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

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5491

IMAGE COURTESY OF ESRI

0 40 80
Feet

N

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

P:\XTO Energy\GIS\MXD\012919118_ROSS RANCH 6 FEDERAL #001\012919118_FIG02_PRELIMINARY_5491.mxd

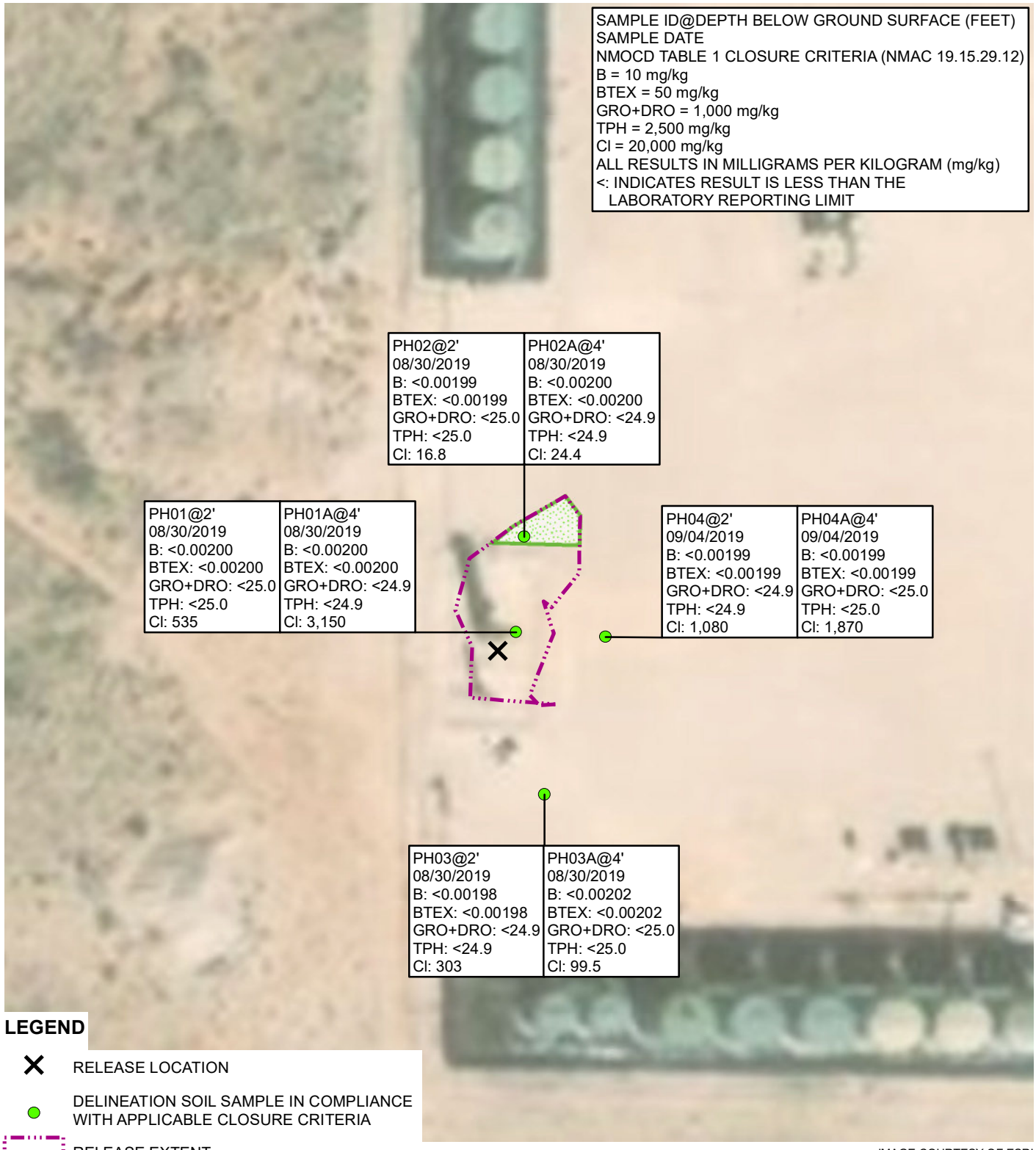


FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
ROSS RANCH 6 FEDERAL #001H BATTERY
UNIT O SEC 6 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919118_ROSS RANCH 6 FEDERAL #001\012919118_FIG03_DELINEATION_5491_1.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

ROSS RANCH 6 FEDERAL #001H BATTERY
REMEDIATION PERMIT NUMBER 2RP-5491
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)
SS01	0.5	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	381	77.6	381	459	5,640
SS02	0.5	06/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	11,100
PH01	2	08/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	535
PH01A	4	08/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	3,150
PH02	2	08/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	16.8
PH02A	4	08/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	24.4
PH03	2	08/30/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	303
PH03A	4	08/30/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<25.0	<25.0	<25.0	<25.0	<25.0	99.5
PH04	2	09/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	1,080
PH04A	4	09/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	1,870
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
mg/kg - milligrams per kilogram
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
NE - not established
TPH - total petroleum hydrocarbons

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5491)

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy Minerals and Natural Resources Department

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Submit to appropriate OCD District office

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Application ID	pAB1917137076

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)* NAB1917140472
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.065107° Longitude -103.918406°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Ranch 6 Federal #001H Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 6/2/2019	API# *(if applicable)* 30-015-36883

Unit Letter	Section	Township	Range	County
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Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.26	Volume Recovered (bbls) 0.25
☒ Produced Water	Volume Released (bbls) 25.62	Volume Recovered (bbls) 24.75
	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

Lease operator reported a release of fluids from the heater treater into earthen containment and onto facility pad due to a worn fire tube gasket. The vessel was isolated and a vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

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Facility ID	
Application ID	pAB1917137076

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 a volume of 25 barrels or more

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Amy Ruth to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), Jim Amos and Deborah McKinney (BLM) on 6/3/2019 by 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:
N/A

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

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

Printed Name: Amy C. Ruth Title: SH&E Coordinator

Signature:  Date: 6/14/2019

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

OCD Only

Received by: Amalia Bustamante Date: 6/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __09/27/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5491
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

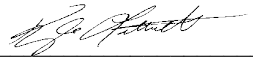
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ 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: 09/27/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: PHOTOGRAPHIC LOG

View of the point of release inside the heater-treater containment.

Project: 012919118	XTO Energy, Inc. Ross Ranch 6 Federal #001H Battery	LTE Advancing Opportunity
June 7, 2019	Photographic Log	

View of area that was scraped within the release extent.

Project: 012919118	XTO Energy, Inc. Ross Ranch 6 Federal #001H Battery	LTE Advancing Opportunity
September 4, 2019	Photographic Log	

ATTACHMENT 3: LITHOLOGIC SOIL SAMPLE LOGS

LT Environmental, Inc.

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:	Date:
PH-1	08/20/2019
Project Name:	**RP Number:**
Ross Ranch 6 fed 1	2RP-5491
Logged By: L. Lambert	**Method:** backhoe
Field Screening: PID, chlorides	**Hole Diameter:** 1'
Lat/Long: 32.065117, -103.918391	**Total Depth:** 6'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: delineation

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	562 (<1A)	3.1	N	PH-1	0			
					1			
					2'			10:45 CALICHE
					3			
dry	2276 (3.4A) (7.6L)	3.2	N	PH-1A	4			10:50 CALICHE, SAND mix
					5			
dry	1880 (6.8L)	4.0	N		6		SP	SAND, Nodl, Coarse
					7			deepest depth
					8			
					9			
					10			
					11			
					12			

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

Identifier: P#02	Date: 08/30/2019
Project Name: Ross Ranch 6 Fed 1	RP Number: 2RP 5491
Logged By: L Lumbard	Method: backhoe
Hole Diameter: 1'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.065912S, -103.915383
Field Screening: PID, chlorides
Comments: delineation

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<128	7.9	N	P#02	0–2		CALICHE	course sand, moderate tan 11:40
dry	<128	8.2	N	P#02A	2–4		SP	11:45 SAND, course
					4–12			deepest depth

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

Identifier: P103	Date: 08/30/2019
Project Name: Ross Ranch 6 Fed 1	RP Number: 2RP-5491
Logged By: L. Lambert	Method: backhoe
Hole Diameter: 1'	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.6499905, -103.9183165
Field Screening: PID, chlorides
Comments: delineation

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			~~Caliche~~
					1			
dry	<128	10.6			2			CALICHE
					3			
dry	128	9.5	N		4			SAND pink w/ Nodules
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH=4	09/04/2019
Project Name:	**RP Number:**
RossRanch 6Fed#1	2RP5491
Logged By: L. Lambert	**Method:** backhoe
Hole Diameter: 1'	**Total Depth:** 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.065113 -103.98308
Field Screening: PID, chlorides
Comments: delineation

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	548 (4')	27.8	N	PH4	0–2			← CALICHE, dry, No odor
dry	1060 5.2	18.3	N	PH4A	2–4		SP	← SAND, dry, No odor
					4–5			deepest depth
					5–12			

Analytical Report 627203

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6 Fed 1H

012919118

18-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

18-JUN-19

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

Reference: XENCO Report No(s): **627203**
Ross Ranch 6 Fed 1H
Project Address: Delaware Basin

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) 627203. 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. 627203 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 627203

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	06-07-19 11:00	0.5 ft	627203-001
SS02	S	06-07-19 11:10	0.5 ft	627203-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092131 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 627203-002.

Batch: LBA-3092686 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 627203

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Fed 1H

Project Id: 012919118
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Tue Jun-11-19 11:20 am
Report Date: 18-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	627203-001		627203-002					
	Field Id:	SS01		SS02					
	Depth:	0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-07-19 11:00		Jun-07-19 11:10					
BTEX by EPA 8021B	***Extracted:***	Jun-14-19 10:00		Jun-14-19 10:00					
	Analyzed:	Jun-15-19 09:53		Jun-15-19 10:10					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Jun-12-19 16:40		Jun-12-19 16:40					
	Analyzed:	Jun-12-19 19:57		Jun-12-19 20:02					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		5640	50.0	11100	100				
TPH by SW8015 Mod	***Extracted:***	Jun-12-19 14:00		Jun-12-19 14:00					
	Analyzed:	Jun-13-19 05:15		Jun-13-19 05:40					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		381	15.0	<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		77.6	15.0	<15.0	15.0				
Total TPH		459	15.0	<15.0	15.0				
Total GRO-DRO		381	15.0	<15.0	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 627203

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 1H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627203-001	Date Collected:	06.07.19 11.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.12.19 16.40	Basis:	Wet Weight
Seq Number:	3092095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5640**	50.0	mg/kg	06.12.19 19.57		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.12.19 14.00	Basis:	Wet Weight
Seq Number:	3092131				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.13.19 05.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**381**	15.0	mg/kg	06.13.19 05.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**77.6**	15.0	mg/kg	06.13.19 05.15		1
Total TPH	PHC635	**459**	15.0	mg/kg	06.13.19 05.15		1
Total GRO-DRO	PHC628	**381**	15.0	mg/kg	06.13.19 05.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.13.19 05.15	
o-Terphenyl	84-15-1	73	%	70-135	06.13.19 05.15	

Certificate of Analytical Results 627203

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 1H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627203-001	Date Collected:	06.07.19 11.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 10.00	Basis:	Wet Weight
Seq Number:	3092686				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.15.19 09.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.15.19 09.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	06.15.19 09.53	
1,4-Difluorobenzene	540-36-3	109	%	70-130	06.15.19 09.53	

Certificate of Analytical Results 627203

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 1H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627203-002	Date Collected:	06.07.19 11.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	06.12.19 16.40	Basis:	Wet Weight
Seq Number:	3092095				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11100**	100	mg/kg	06.12.19 20.02		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.12.19 14.00	Basis:	Wet Weight
Seq Number:	3092131				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.13.19 05.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.13.19 05.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.13.19 05.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.13.19 05.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.13.19 05.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.13.19 05.40	
o-Terphenyl	84-15-1	69	%	70-135	06.13.19 05.40	**

Certificate of Analytical Results 627203

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Fed 1H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627203-002	Date Collected:	06.07.19 11.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.14.19 10.00	Basis:	Wet Weight
Seq Number:	3092686				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.15.19 10.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.15.19 10.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	06.15.19 10.10	
4-Bromofluorobenzene	460-00-4	74	%	70-130	06.15.19 10.10	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 627203

LT Environmental, Inc.

Ross Ranch 6 Fed 1H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092095 Matrix: Solid Date Prep: 06.12.19
MB Sample Id: 7679764-1-BLK LCS Sample Id: 7679764-1-BKS LCSD Sample Id: 7679764-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	232	93	231	92	90-110	0	20	mg/kg	06.12.19 19:17	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092095 Matrix: Soil Date Prep: 06.12.19
Parent Sample Id: 627201-007 MS Sample Id: 627201-007 S MSD Sample Id: 627201-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	153	252	399	98	401	98	90-110	1	20	mg/kg	06.12.19 19:34	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3092095 Matrix: Soil Date Prep: 06.12.19
Parent Sample Id: 627202-001 MS Sample Id: 627202-001 S MSD Sample Id: 627202-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	67.9	252	325	102	326	102	90-110	0	20	mg/kg	06.12.19 21:15	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092131 Matrix: Solid Date Prep: 06.12.19
MB Sample Id: 7679805-1-BLK LCS Sample Id: 7679805-1-BKS LCSD Sample Id: 7679805-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1050	105	1020	102	70-135	3	20	mg/kg	06.12.19 23:04	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1020	102	70-135	2	20	mg/kg	06.12.19 23:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		98		97		70-135	%	06.12.19 23:04
o-Terphenyl	85		87		90		70-135	%	06.12.19 23:04

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

QC Summary 627203

LT Environmental, Inc.

Ross Ranch 6 Fed 1H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3092131 Matrix: Soil Date Prep: 06.12.19
Parent Sample Id: 627201-001 MS Sample Id: 627201-001 S MSD Sample Id: 627201-001 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)	10.2	999	940	93	1050	104	70-135	11	20	mg/kg	06.13.19 00:18	
Diesel Range Organics (DRO)	<8.12	999	889	89	996	100	70-135	11	20	mg/kg	06.13.19 00:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		105		70-135	%	06.13.19 00:18
o-Terphenyl	83		87		70-135	%	06.13.19 00:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3092686 Matrix: Solid Date Prep: 06.14.19
MB Sample Id: 7680032-1-BLK LCS Sample Id: 7680032-1-BKS LCSD Sample Id: 7680032-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0880	88	0.0894	90	70-130	2	35	mg/kg	06.15.19 04:26	
Toluene	<0.00201	0.100	0.0798	80	0.0808	81	70-130	1	35	mg/kg	06.15.19 04:26	
Ethylbenzene	<0.00201	0.100	0.0900	90	0.0913	92	70-130	1	35	mg/kg	06.15.19 04:26	
m,p-Xylenes	<0.00402	0.201	0.181	90	0.183	92	70-130	1	35	mg/kg	06.15.19 04:26	
o-Xylene	<0.00201	0.100	0.0867	87	0.0878	88	70-130	1	35	mg/kg	06.15.19 04:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		109		70-130	%	06.15.19 04:26
4-Bromofluorobenzene	73		86		86		70-130	%	06.15.19 04:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3092686 Matrix: Soil Date Prep: 06.14.19
Parent Sample Id: 627201-001 MS Sample Id: 627201-001 S MSD Sample Id: 627201-001 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	0.0923	91	0.0869	87	70-130	6	35	mg/kg	06.15.19 05:00	
Toluene	<0.00201	0.101	0.0835	83	0.0781	78	70-130	7	35	mg/kg	06.15.19 05:00	
Ethylbenzene	<0.00201	0.101	0.0943	93	0.0886	89	70-130	6	35	mg/kg	06.15.19 05:00	
m,p-Xylenes	<0.00402	0.201	0.190	95	0.179	90	70-130	6	35	mg/kg	06.15.19 05:00	
o-Xylene	<0.00201	0.101	0.0911	90	0.0863	86	70-130	5	35	mg/kg	06.15.19 05:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	06.15.19 05:00
4-Bromofluorobenzene	89		88		70-130	%	06.15.19 05:00

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

Chain of Custody

Work Order No: 627203

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

Program: UST/PST ☐ RP ☐ 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 1H	Turn Around	
Project Number:	01291918	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.4/0.4	Thermometer ID:	VE	
Received Intact:	Yes No			
Cooler Custody Seals:	~~Yes~~ No N/A	Correction Factor:	-0.2	
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)
SS01	S	11:00	06/07/2019	0.5'	1	X	X	X
SS02	S	11:10	06/07/2019	0.5'	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
1		6/10/19 @ 0830	2		6/11/19 1130
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/11/2019 11:20:00 AM

Work Order #: 627203

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

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**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)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 06/11/2019
Brianna Teel

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

Analytical Report 636072

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Ranch 6 Federal #1

012919118

12-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

12-SEP-19

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

Reference: XENCO Report No(s): **636072**
Ross Ranch 6 Federal #1
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) 636072. 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. 636072 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 636072

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	08-30-19 10:45	2 ft	636072-001
PH01A	S	08-30-19 10:50	4 ft	636072-002
PH02	S	08-30-19 11:40	2 ft	636072-003
PH02A	S	08-30-19 11:45	4 ft	636072-004
PH03	S	08-30-19 13:05	2 ft	636072-005
PH03A	S	08-30-19 13:15	4 ft	636072-006
PH04	S	09-04-19 09:35	2 ft	636072-007
PH04A	S	09-04-19 09:45	4 ft	636072-008

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100790 BTEX by EPA 8021B

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

Certificate of Analysis Summary 636072

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Federal #1

Project Id: 012919118
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Sep-05-19 10:40 am
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	636072-001		636072-002		636072-003		636072-004		636072-005		636072-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-30-19 10:45		Aug-30-19 10:50		Aug-30-19 11:40		Aug-30-19 11:45		Aug-30-19 13:05		Aug-30-19 13:15	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-06-19 12:00		Sep-06-19 12:00		Sep-06-19 12:00		Sep-06-19 12:00		Sep-06-19 12:00		Sep-06-19 12:00	
	Analyzed:	Sep-07-19 00:08		Sep-07-19 00:29		Sep-07-19 00:49		Sep-07-19 01:09		Sep-07-19 01:29		Sep-07-19 01:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00400	0.00400	<0.00398	0.00398	<0.00399	0.00399	<0.00396	0.00396	<0.00404	0.00404
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00198	0.00198	<0.00202	0.00202
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-06-19 16:50		Sep-06-19 16:50		Sep-09-19 10:35		Sep-09-19 10:35		Sep-06-19 16:50		Sep-06-19 16:50	
	Analyzed:	Sep-06-19 20:21		Sep-06-19 20:27		Sep-09-19 16:29		Sep-09-19 16:41		** ** ** **		Sep-06-19 21:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		535	4.99	3150	25.2	16.8	4.96	24.4	4.98	303	5.00	99.5	4.97
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-06-19 12:30		Sep-06-19 12:30		Sep-06-19 12:30		Sep-06-19 12:30		Sep-06-19 12:30		Sep-06-19 12:30	
	Analyzed:	Sep-07-19 00:55		Sep-07-19 01:14		Sep-07-19 01:33		Sep-07-19 01:53		Sep-07-19 02:12		Sep-07-19 02:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0
Total TPH		<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0

Certificate of Analysis Summary 636072

LT Environmental, Inc., Arvada, CO

Project Name: Ross Ranch 6 Federal #1

Project Id: 012919118
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Sep-05-19 10:40 am
Report Date: 12-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	636072-007		636072-008					
	Field Id:	PH04		PH04A					
	Depth:	2- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Sep-04-19 09:35		Sep-04-19 09:45					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-06-19 12:00		Sep-06-19 12:00					
	Analyzed:	Sep-07-19 02:09		Sep-07-19 02:29					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00199	0.00199	<0.00199	0.00199				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-06-19 16:50		Sep-06-19 16:50					
	Analyzed:	Sep-06-19 21:06		Sep-06-19 21:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		1080	4.98	1870	25.1				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-06-19 12:30		Sep-06-19 12:30					
	Analyzed:	Sep-07-19 02:50		Sep-07-19 03:09					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0				
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0				
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0				
Total GRO-DRO		<24.9	24.9	<25.0	25.0				
Total TPH		<24.9	24.9	<25.0	25.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 636072

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-001	Date Collected:	08.30.19 10.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**535**	4.99	mg/kg	09.06.19 20.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.07.19 00.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.07.19 00.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.07.19 00.55	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.07.19 00.55	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.07.19 00.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	09.07.19 00.55	
o-Terphenyl	84-15-1	89	%	70-135	09.07.19 00.55	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-001	Date Collected:	08.30.19 10.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.07.19 00.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.07.19 00.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.07.19 00.08	
4-Bromofluorobenzene	460-00-4	103	%	70-130	09.07.19 00.08	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-002	Date Collected:	08.30.19 10.50	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3150**	25.2	mg/kg	09.06.19 20.27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.07.19 01.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.07.19 01.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.07.19 01.14	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.07.19 01.14	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.07.19 01.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.07.19 01.14	
o-Terphenyl	84-15-1	91	%	70-135	09.07.19 01.14	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-002	Date Collected:	08.30.19 10.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.07.19 00.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.07.19 00.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	09.07.19 00.29	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.07.19 00.29	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**PH02**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-003	Date Collected:	08.30.19 11.40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.09.19 10.35	Basis:	Wet Weight
Seq Number:	3100906			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.8**	4.96	mg/kg	09.09.19 16.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.07.19 01.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.07.19 01.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.07.19 01.33	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.07.19 01.33	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.07.19 01.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	09.07.19 01.33	
o-Terphenyl	84-15-1	90	%	70-135	09.07.19 01.33	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-003	Date Collected:	08.30.19 11.40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.07.19 00.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.07.19 00.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	09.07.19 00.49	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.07.19 00.49	

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Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-004	Date Collected:	08.30.19 11.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.09.19 10.35	Basis:	Wet Weight
Seq Number:	3100906			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.4**	4.98	mg/kg	09.09.19 16.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.07.19 01.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.07.19 01.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.07.19 01.53	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.07.19 01.53	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.07.19 01.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.07.19 01.53	
o-Terphenyl	84-15-1	92	%	70-135	09.07.19 01.53	

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Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-004	Date Collected:	08.30.19 11.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.07.19 01.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.07.19 01.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.07.19 01.09	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.07.19 01.09	

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Sample Id:	**PH03**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-005	Date Collected:	08.30.19 13.05	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**303**	5.00	mg/kg	09.06.19 16.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.07.19 02.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.07.19 02.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.07.19 02.12	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.07.19 02.12	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.07.19 02.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	09.07.19 02.12	
o-Terphenyl	84-15-1	88	%	70-135	09.07.19 02.12	

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LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-005	Date Collected:	08.30.19 13.05	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.07.19 01.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.07.19 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.07.19 01.29	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.07.19 01.29	

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Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-006	Date Collected:	08.30.19 13.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**99.5**	4.97	mg/kg	09.06.19 21.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.07.19 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.07.19 02.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.07.19 02.31	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.07.19 02.31	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.07.19 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.07.19 02.31	
o-Terphenyl	84-15-1	91	%	70-135	09.07.19 02.31	

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Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-006	Date Collected:	08.30.19 13.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.07.19 01.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.07.19 01.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	09.07.19 01.49	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.07.19 01.49	

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Ross Ranch 6 Federal #1

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-007	Date Collected:	09.04.19 09.35	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1080**	4.98	mg/kg	09.06.19 21.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.07.19 02.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.07.19 02.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.07.19 02.50	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.07.19 02.50	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.07.19 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	09.07.19 02.50	
o-Terphenyl	84-15-1	90	%	70-135	09.07.19 02.50	

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Sample Id:	**PH04**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-007	Date Collected:	09.04.19 09.35	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.07.19 02.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.07.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.07.19 02.09	
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.07.19 02.09	

Certificate of Analytical Results 636072

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-008	Date Collected:	09.04.19 09.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	CHE	Date Prep:	09.06.19 16.50	Basis:	Wet Weight
Seq Number:	3100796			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1870**	25.1	mg/kg	09.06.19 21.12		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.06.19 12.30	Basis:	Wet Weight
Seq Number:	3100799			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.07.19 03.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.07.19 03.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.07.19 03.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.07.19 03.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.07.19 03.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	09.07.19 03.09	
o-Terphenyl	84-15-1	90	%	70-135	09.07.19 03.09	

Certificate of Analytical Results 636072

LT Environmental, Inc., Arvada, CO

Ross Ranch 6 Federal #1

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	09.05.19 10.40
Lab Sample Id:	636072-008	Date Collected:	09.04.19 09.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.06.19 12.00	Basis:	Wet Weight
Seq Number:	3100790			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.07.19 02.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.07.19 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	09.07.19 02.29	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.07.19 02.29	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 636072

LT Environmental, Inc.

Ross Ranch 6 Federal #1

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100796 Matrix: Solid Date Prep: 09.06.19
MB Sample Id: 7685763-1-BLK LCS Sample Id: 7685763-1-BKS LCSD Sample Id: 7685763-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.53	250	255	102	258	103	90-110	1	20	mg/kg	09.06.19 19:35	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100906 Matrix: Solid Date Prep: 09.09.19
MB Sample Id: 7685781-1-BLK LCS Sample Id: 7685781-1-BKS LCSD Sample Id: 7685781-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	247	99	90-110	0	20	mg/kg	09.09.19 13:53	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100796 Matrix: Soil Date Prep: 09.06.19
Parent Sample Id: 636059-012 MS Sample Id: 636059-012 S MSD Sample Id: 636059-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	146	503	683	107	682	107	90-110	0	20	mg/kg	09.06.19 19:55	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100796 Matrix: Soil Date Prep: 09.06.19
Parent Sample Id: 636072-006 MS Sample Id: 636072-006 S MSD Sample Id: 636072-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	99.5	497	634	108	634	108	90-110	0	20	mg/kg	09.06.19 21:25	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100906 Matrix: Soil Date Prep: 09.09.19
Parent Sample Id: 635363-006 MS Sample Id: 635363-006 S MSD Sample Id: 635363-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.3	251	283	102	283	102	90-110	0	20	mg/kg	09.09.19 14:12	

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

QC Summary 636072

LT Environmental, Inc.

Ross Ranch 6 Federal #1

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100906 Matrix: Soil Date Prep: 09.09.19
Parent Sample Id: 636219-001 MS Sample Id: 636219-001 S MSD Sample Id: 636219-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1090	249	1280	76	1280	76	90-110	0	20	mg/kg	09.09.19 15:44	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3100799 Matrix: Solid Date Prep: 09.06.19
MB Sample Id: 7685727-1-BLK LCS Sample Id: 7685727-1-BKS LCSD Sample Id: 7685727-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	949	95	968	97	70-135	2	20	mg/kg	09.06.19 19:27	
Diesel Range Organics (DRO)	<25.0	1000	910	91	931	93	70-135	2	20	mg/kg	09.06.19 19:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		119		116		70-135	%	09.06.19 19:27
o-Terphenyl	99		100		100		70-135	%	09.06.19 19:27

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3100799 Matrix: Soil Date Prep: 09.06.19
Parent Sample Id: 636059-001 MS Sample Id: 636059-001 S MSD Sample Id: 636059-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	921	92	934	94	70-135	1	20	mg/kg	09.06.19 20:25	
Diesel Range Organics (DRO)	<24.9	997	892	89	903	91	70-135	1	20	mg/kg	09.06.19 20:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		121		70-135	%	09.06.19 20:25
o-Terphenyl	103		99		70-135	%	09.06.19 20:25

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 636072

LT Environmental, Inc.

Ross Ranch 6 Federal #1

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

Seq Number: 3100790 Matrix: Solid Date Prep: 09.06.19

MB Sample Id: 7685717-1-BLK LCS Sample Id: 7685717-1-BKS LCSD Sample Id: 7685717-1-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	0.0973	97	0.103	103	70-130	6	35	mg/kg	09.06.19 22:09	
Toluene	<0.00200	0.100	0.0959	96	0.105	105	70-130	9	35	mg/kg	09.06.19 22:09	
Ethylbenzene	<0.00200	0.100	0.100	100	0.113	113	70-130	12	35	mg/kg	09.06.19 22:09	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.222	111	70-130	14	35	mg/kg	09.06.19 22:09	
o-Xylene	<0.00200	0.100	0.101	101	0.116	116	70-130	14	35	mg/kg	09.06.19 22:09	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		98		98		70-130	%	09.06.19 22:09
4-Bromofluorobenzene	99		107		119		70-130	%	09.06.19 22:09

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

Seq Number: 3100790 Matrix: Soil Date Prep: 09.06.19

Parent Sample Id: 636072-001 MS Sample Id: 636072-001 S MSD Sample Id: 636072-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0735	74	0.0746	74	70-130	1	35	mg/kg	09.06.19 22:49	
Toluene	<0.00200	0.100	0.0754	75	0.0775	77	70-130	3	35	mg/kg	09.06.19 22:49	
Ethylbenzene	<0.00200	0.100	0.0791	79	0.0793	79	70-130	0	35	mg/kg	09.06.19 22:49	
m,p-Xylenes	<0.00401	0.200	0.154	77	0.157	78	70-130	2	35	mg/kg	09.06.19 22:49	
o-Xylene	<0.00200	0.100	0.0784	78	0.0809	80	70-130	3	35	mg/kg	09.06.19 22:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		98		70-130	%	09.06.19 22:49
4-Bromofluorobenzene	113		118		70-130	%	09.06.19 22:49

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

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

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

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

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com

Work Order No: 636072

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, Tx 79705	City, State ZIP:	
Phone:	(432) 236-3849	Email:	llaumbach@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 ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Ranch 6 Federal #1	Turn Around	
Project Number:	12919118	Routine	X
P.O. Number:	2RP-5491	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.0	Thermometer ID	
Received Intact:	Yes No	T-MM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	9

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	08/30/2019	10:45	2.0'	1	X	X	X
PH01A	S		10:50	4'	1	X	X	X
PH02	S		11:40	2'	1	X	X	X
PH02A	S		11:45	4'	1	X	X	X
PH03	S		13:05	2'	1	X	X	X
PH03A	S		13:15	4'	1	X	X	X
PH04	S	09/04/2019	9:35	2'	1	X	X	X
PH04A	S	09/04/2019	9:45	4'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			09/05/2019 10:40	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **47512**

Date/Time: 09/05/19 13:54
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.: 776167105560
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636072-001	S	PH01	08/30/19 10:45	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-001	S	PH01	08/30/19 10:45	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-001	S	PH01	08/30/19 10:45	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-002	S	PH01A	08/30/19 10:50	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-002	S	PH01A	08/30/19 10:50	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-002	S	PH01A	08/30/19 10:50	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-003	S	PH02	08/30/19 11:40	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-003	S	PH02	08/30/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-003	S	PH02	08/30/19 11:40	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-004	S	PH02A	08/30/19 11:45	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-004	S	PH02A	08/30/19 11:45	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-004	S	PH02A	08/30/19 11:45	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-005	S	PH03	08/30/19 13:05	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-005	S	PH03	08/30/19 13:05	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-005	S	PH03	08/30/19 13:05	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-006	S	PH03A	08/30/19 13:15	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/13/19	JKR	GRO-DRO PHCC10C28 PI	
636072-006	S	PH03A	08/30/19 13:15	SW8021B	BTEX by EPA 8021B	09/11/19	09/13/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-006	S	PH03A	08/30/19 13:15	E300_CL	Chloride by EPA 300	09/11/19	02/26/20	JKR	CL	
636072-007	S	PH04	09/04/19 09:35	E300_CL	Chloride by EPA 300	09/11/19	03/02/20	JKR	CL	
636072-007	S	PH04	09/04/19 09:35	SW8021B	BTEX by EPA 8021B	09/11/19	09/18/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-007	S	PH04	09/04/19 09:35	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/18/19	JKR	GRO-DRO PHCC10C28 PI	
636072-008	S	PH04A	09/04/19 09:45	SW8021B	BTEX by EPA 8021B	09/11/19	09/18/19	JKR	BR4FBZ BZ BZME EBZ X	
636072-008	S	PH04A	09/04/19 09:45	E300_CL	Chloride by EPA 300	09/11/19	03/02/20	JKR	CL	
636072-008	S	PH04A	09/04/19 09:45	SW8015MOD_NM	TPH by SW8015 Mod	09/11/19	09/18/19	JKR	GRO-DRO PHCC10C28 PI	

Inter-Office Shipment

IOS Number **47512**

Date/Time: 09/05/19 13:54
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776167105560

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

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 09/05/2019

Received By: Brianna Teel

Date Received: 09/06/2019 11:12

Cooler Temperature: 2.1

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47512

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

Sent By: Elizabeth McClellan **Date Sent:** 09/05/2019 01:54 PM

Received By: Brianna Teel **Date Received:** 09/06/2019 11:12 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 09/06/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/05/2019 10:40:00 AM

Work Order #: 636072

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)?	3.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed TO Xenco Midland.
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/05/2019

Checklist reviewed by: Jessica Kramer Date: 09/06/2019