ENSOLUM

July 10, 2023

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Closure Request Addendum
James Ranch Unit #066
Incident Number NAB1601927715
Eddy County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of XTO Energy, Inc. (XTO), has prepared the following addendum to the original *Closure Request* dated October 16, 2019. This addendum provides an update to the depth to groundwater determination activities at the James Ranch Unit #066 (Site) in response to the denial of the original *Closure Request* by the New Mexico Oil Conservation Division (NMOCD). In the denial, NMOCD indicated that the depth to groundwater assessment was not sufficient. Based on the additional depth to groundwater determination activities described below, XTO is submitting this *Closure Request Addendum* and requesting closure for Incident Number NAB1601927715.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit M, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (32.34313°, -103.83973°) and is associated with oil and gas exploration and production operations on land managed by the New Mexico State Land Office (SLO).

On January 12, 2016, the wellhead stuffing box packing failed, causing fluid to spray onto the surface of the well pad. Approximately 6 barrels (bbls) of crude oil and 1.5 bbls of produced water were released, affecting approximately 5,470 square feet of the well pad. No released fluids were recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (C-141) on January 14, 2016. The release was assigned Remediation Permit Number 2RP-3500 and Incident Number NAB1601927715. The release occurred on an active well pad and as such, additional cultural resource or biological surveys were not required and reclamation and reseeding will be completed at the time of pad abandonment.

The release was included in the Compliance Agreement for Remediation for Historical Releases between XTO and the NMOCD effective November 13, 2018. The purpose of the Compliance Agreement was to ensure that reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with 19.15.29 of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

BACKGROUND

The original *Closure Request* detailed site characterization according to Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the NMAC. Results from the

site characterization are presented on page 3 of the Form C-141, Site Assessment/Characterization. Potential site receptors are identified on Figure 1. Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) were applied:

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

Between February 2018 and June 2019, delineation and excavation activities were conducted at the Site to address the impacted soil resulting from the January 12, 2016, crude oil and produced water release. Closure was requested on October 16, 2019, based on laboratory analytical results for the excavation and delineation soil samples indicating benzene, BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Site Closure Criteria. Additional details regarding the delineation and excavation activities can be referenced in the original October 16, 2019 *Closure Request*.

On April 11, 2023, NMOCD denied the *Closure Request* for Incident Number NAB1601927715 for the following reason:

- *The depth to groundwater has not been adequately determined. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided in the submission. The responsible party may choose to remediate to the most stringent levels listed in Table I of 19.15.29 NMAC in lieu of drilling to determine the depth to groundwater.*

ADDITIONAL DEPTH TO GROUNDWATER DETERMINATION

New depth to groundwater data became available since the submittal of the original 2019 *Closure Request*. A borehole was drilled approximately 0.31 miles northeast of the Site during January 2020, for determination of regional groundwater depth. The borehole was advanced to a depth of 110 feet below ground surface (bgs) via Sonic drill rig and was permitted as New Mexico Office of the State Engineer (NMOSE) well C-04387. The location of the borehole is presented on Figure 1. A field geologist logged and described soils continuously. The borehole lithologic/soil sampling log is included in Appendix A. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was confirmed that groundwater was greater than 110 feet bgs. The borehole was properly abandoned using drill cuttings and hydrated bentonite chips. All wells used for depth to groundwater determination are depicted on Figure 1 and the referenced well records are included in Appendix A.

Based on confirmed depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site, the Table I Closure Criteria identified in the original *Closure Request* are applicable and appropriate for protection of groundwater at this Site.

CLOSURE REQUEST

Site assessment and excavation activities were completed at the Site to address the impacted soil resulting from the January 12, 2016, release of crude oil and produced water. Based on depth to groundwater greater than 100 feet bgs within 0.5 miles of the Site as presented in this addendum and

laboratory analytical results for the final excavation and delineation soil samples compliant with the confirmed Site Closure Criteria, XTO respectfully requests no further action for Incident Number NAB1601927715.

If you have any questions or comments, please contact Ms. Tacoma Morrissey at (337) 257-8307 or tmorrissey@ensolum.com.

Sincerely,
Ensolum, LLC

Aimee Cole
Senior Managing Scientist

Ashley Ager, P.G.
Program Director

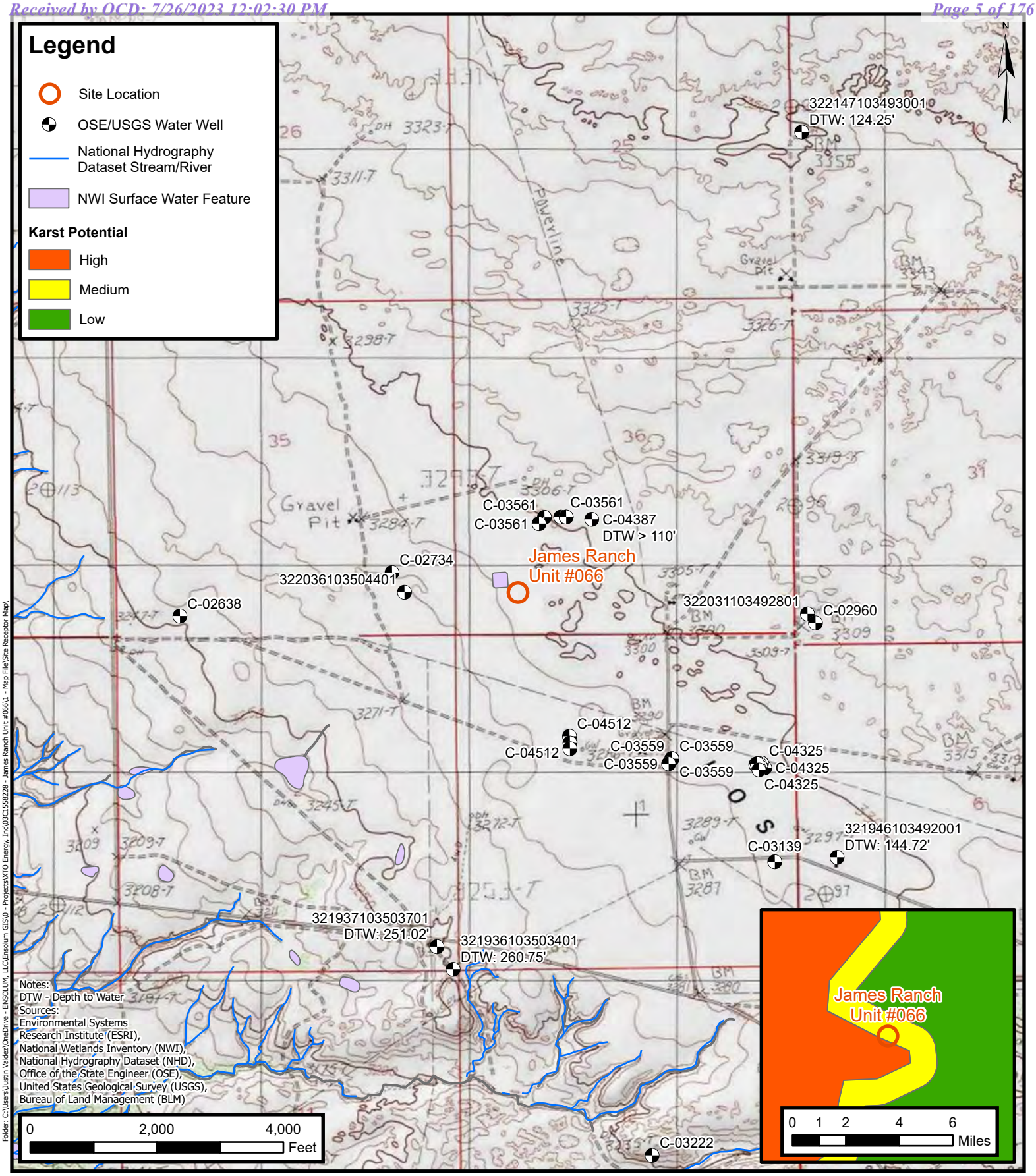
cc: Garrett Green, XTO
Shelby Pennington, XTO
New Mexico State Land Office

Appendices:

Figure 1	Site Receptor Map
Appendix A	Referenced Well Records
Appendix B	October 16, 2019 Closure Request

ENSOLUM

FIGURES



Folder: C:\Users\Justin Valdez\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\XTO Energy, Inc\03C1558228 - James Ranch Unit #066\1 - Map File\Site Receptor Map\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

XTO Energy, Inc.
James Ranch Unit #066
Incident Number: nAB1601927715
Unit M, Section 36, Township 22 South, Range 30 East
Eddy County, New Mexico

FIGURE 1

ENSOLUM

APPENDIX A

Referenced Well Records

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation	Identifier: BH01/C-04387	Date: 1/18-1/21/20
	Project Name: JRU 29	RP Number: 2RP-3302, 2RP-3726, 2RP-4040, 2RP-3082
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: BB, FS, WM	Method: Sonic Drill
Lat/Long:	Field Screening: NA	Hole Diameter: 6" / Total Depth: 110'

Comments:
No field screenings, lithology remarks only

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D			N		0	0'	CCHE	CALICHE, tan-off white, fill
						0.5'	SP	SAND, dry, reddish brown, poorly graded, fine-very fine, soft no odor, no stain
D			N			5'	CCHE	CALICHE, dry, tan-off white, few subangular gravel, trace fine sand, no odor, no stain
D			N		10'	12.5'	SP-SM	silty SAND, dry, reddish brown, poorly graded, fine grained, few tan-off white subangular gravel, no stain, no odor
D			N		20'	23'	ML-S	SILTSTONE, dry, reddish brown, moderatley consolidated, 2mm caliche inclusions, trace off-white subangular gravel, no stain, no odor
D			N		30'			
M			N			37'		moist
					40'			
D			N			45'		dry
D			N		50'			
D			N		60'	58'	CL-S	CLAYSTONE, dry, reddish brown, low plasticity, cohesive, well consolidated with some silty dolomite inclusions (1-2mm), no stain, no odor
D			N					
D			N		70'			
D			N		80'			
D			N		90'			
D			N		100'			
M			N			102'		moist
M			N		110'			Total Depth 110 feet bgs

File ** C-4387

NEW MEXICO OFFICE OF THE STATE ENGINEER

WR-07 APPLICATION FOR PERMIT TO DRILL

A WELL WITH NO WATER RIGHT

(check applicable box):

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And/Or Recovery	☐ Ground Source Heat Pump
☐ Exploratory Well (Pump test)	☐ Construction Site/Public Works Dewatering	☒ Other(Describe): Environmental Sampling
☒ Monitoring Well	☐ Mine Dewatering	

A separate permit will be required to apply water to beneficial use regardless if use is consumptive or nonconsumptive.

☒ Temporary Request - Requested Start Date: December 16, 2019 Requested End Date: TBD

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1. APPLICANT(S)

Name: Kyle Littrell	Name: Aimee Cole
Contact or Agent: check here if Agent ☐ XTO Energy, Inc.	Contact or Agent: check here if Agent ☐ LT Environmental, Inc.
Mailing Address: 6401 Holiday Hill Road	Mailing Address: 3300 North "A" Street, Building 1 #103
City: Midland	City: Midland
State: Texas Zip Code: 79707	State: Texas Zip Code: 79707
Phone: 432-682-8873 ☐ Home ☐ Cell Phone (Work):	Phone: 720-384-7365 ☐ Home ☒ Cell Phone (Work):
E-mail (optional): kyle_littrell@xtoenergy.com	E-mail (optional): acole@ltenv.com

FOR OSE INTERNAL USE Application for Permit, Form WR-07, Rev 11/17/16

File No.: C-4387	Trn. No.: 663865	Receipt No.: 2-41496
Trans Description (optional):		
Sub-Basin: CUB	PCW/LOG Due Date: 12-31-20	

2. WELL(S) Describe the well(s) applicable tc application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☐ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☐ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

■ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range)* OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
C-4387 POD1 SP-11	103 50 9.29 -103.835916	32 20 46.60 32.346280	NE/4 SW/4, SEC36, T22S, R30E

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☐ **Yes** ■ **No** **If yes, how many**

Other description relating well to common landmarks, streets, or other:
Site located at 32.346,-103.835 Eddy County, New Mexico

Well is on land owned by: State of New Mexico

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ **Yes** ■ **No**
If yes, how many

Approximate depth of well (feet): 100	Outside diameter of well casing (inches): 2.25-6.25
Driller Name: Cascade Drilling LP	Driller License Number: 1664

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Soil boring to be installed to assess subsurface soil and water. Borings will be advanced in an area previously excavated for remedial purposes. Boring will be completed as a 2-inch inside diameter PVC wells.

Monitoring well is anticipated to be present for up to 2 years. Dry boreholes will be abandoned within 3 days of completion.

Location of the monitoring well is depicted on the attached figure.

FOR OSE INTERNAL USE — Application for Permit, Form WR-07

File No.: C-4387	Trn No.: 663865

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory: ☐ Include a description of any proposed pump test, if applicable.	**Pollution Control and/or Recovery:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	**Construction De-Watering:** ☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	**Mine De-Watering:** ☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water. ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ■ Include the reason for the monitoring well, and, ■ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Ground Source Heat Pump:** ☐ Include a description of the geothermal heat exchange project, ☐ The number of boreholes for the completed project and required depths. ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), Stuart Hyde, LG
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

Stuart Hyde Digitally signed by Stuart Hyde Date: 2019.11.25 08:51:21 -07'00'
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is:

☒ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 16th day of December 20 19, for the State Engineer,

John R. D'Antonio, Jr., P.E., State Engineer

By: _____ _____
Signature Print

Title: Juan Hernandez, Water Resources Manager 1
Print

FOR OSE INTERNAL USE Application for Permit, Form WR-07

File No.: C-4387	Trn No.: 663865

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

17-1A Depth of the well shall not exceed the thickness of the valley fill.

17-4 No water shall be appropriated and beneficially used under this permit.

17-6 The well authorized by this permit shall be plugged completely using the following method per Rules and Regulations Governing Well Driller Licensing, Construction, Repair and Plugging of Wells; Subsection C of 19.27.4.30 NMAC unless an alternative plugging method is proposed by the well owner and approved by the State Engineer upon completion of the permitted use. All pumping appurtenance shall be removed from the well prior to plugging. To plug a well, the entire well shall be filled from the bottom upwards to ground surface using a tremie pipe. The bottom of the tremie shall remain submerged in the sealant throughout the entire sealing process; other placement methods may be acceptable and approved by the state engineer. The well shall be plugged with an office of the state engineer approved sealant for use in the plugging of non-artesian wells. The well driller shall cut the casing off at least four (4) feet below ground surface and fill the open hole with at least two vertical feet of approved sealant. The driller must fill or cover any open annulus with sealant. Once the sealant has cured, the well driller or well owner may cover the seal with soil. A Plugging Report for said well shall be filed with the Office of the State Engineer in a District Office within 30 days of completion of the plugging.

17-7 The Permittee shall utilize the highest and best technology available to ensure conservation of water to the maximum extent practical.

Trn Desc: C 04387 POD1 File Number: C 04387
Trn Number: 663865

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

17-B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with 72-12-12 NMSA 1978. A licensed driller shall not be required for the construction of a well driven without the use of a drill rig, provided that the casing shall not exceed two and three-eighths (2 3/8) inches outside diameter.

17-C The well driller must file the well record with the State Engineer and the applicant within 30 days after the well is drilled or driven. It is the well owner's responsibility to ensure that the well driller files the well record.
The well driller may obtain the well record form from any District Office or the Office of the State Engineer website.

17-P The well shall be constructed, maintained, and operated to prevent inter-aquifer exchange of water and to prevent loss of hydraulic head between hydrogeologic zones.

17-Q The State Engineer retains jurisdiction over this permit.

17-R Pursuant to section 72-8-1 NMSA 1978, the permittee shall allow the State Engineer and OSE representatives entry upon private property for the performance of their respective duties, including access to the ditch or acequia to measure flow and also to the well for meter reading and water level measurement.

LOG The Point of Diversion C 04387 POD1 must be completed and the Well Log filed on or before 12/31/2020.

IT IS THE PERMITTEES RESPONSIBILITY TO OBTAIN ALL AUTHORIZATIONS AND PERMISSIONS TO DRILL ON PROPERTY OF OTHER OWNERSHIP BEFORE COMMENCING ACTIVITIES UNDER THIS PERMIT.

SHOULD THE PERMITTEE CHANGE THE PURPOSE OF USE TO OTHER THAN MONITORING PURPOSES, AN APPLICATION SHALL BE ACQUIRED FROM THE OFFICE OF THE STATE ENGINEER.

Trn Desc: C 04387 POD1 File Number: C 04387
Trn Number: 663865

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd. Corrected:
Formal Application Rcvd: 12/02/2019	Pub. of Notice Ordered:
Date Returned - Correction:	Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 16 day of Dec A.D., 2019

John R. D Antonio, Jr., P.E., State Engineer

By: _____
Juan Hernandez

Trn Desc: C 04387 POD1 File Number: C 04387
Trn Number: 663865

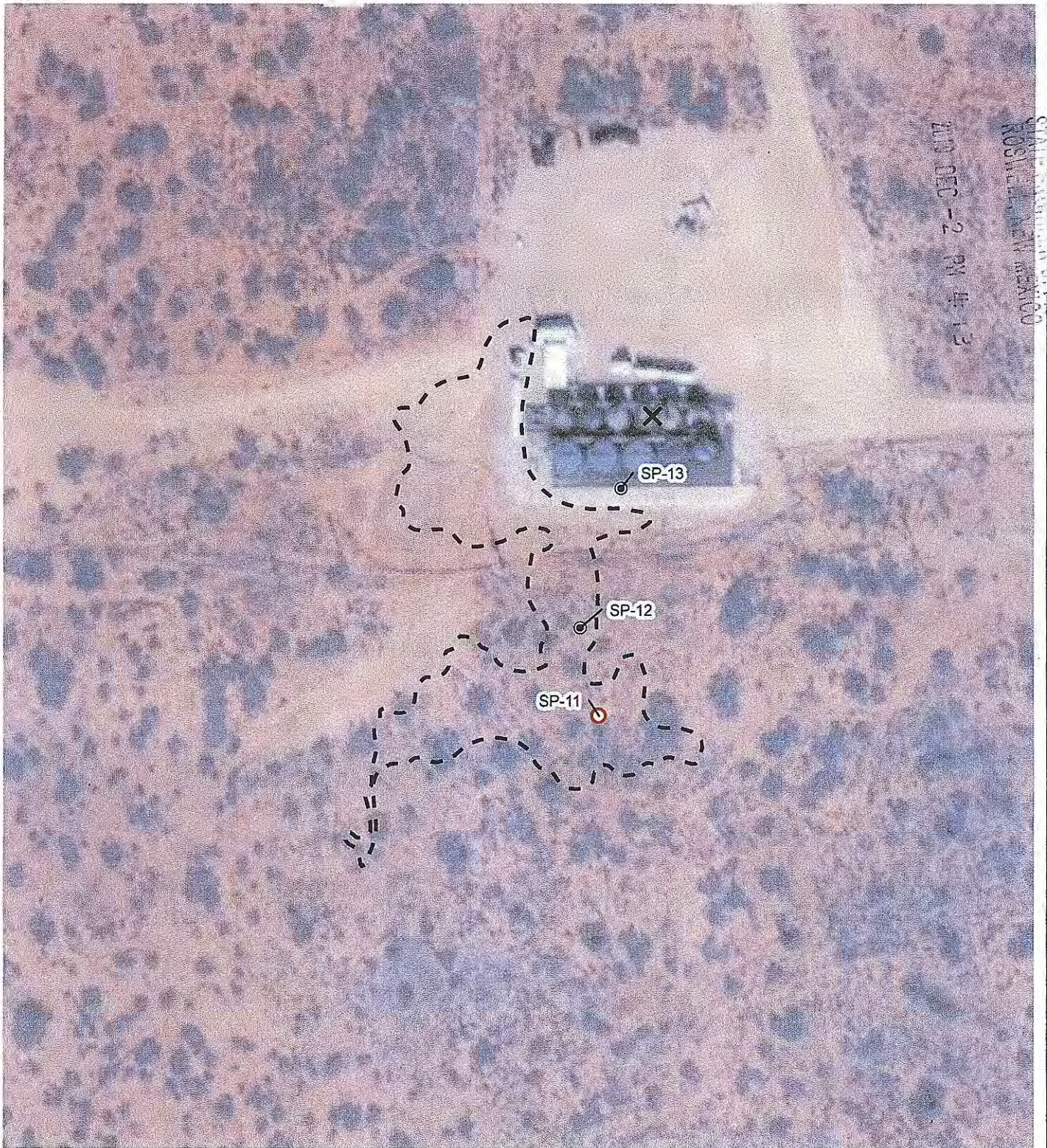


IMAGE COURTESY OF ESRI

LEGEND

- RELEASE LOCATION
- PROPOSED BORING
- PROPOSED MONITORING WELL
- EXCAVATION EXTENT (4 FEET)

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2726, 2RP-3082, 2RP-3302, 2RP-3726, 2RP-4040, & 2RP-4833

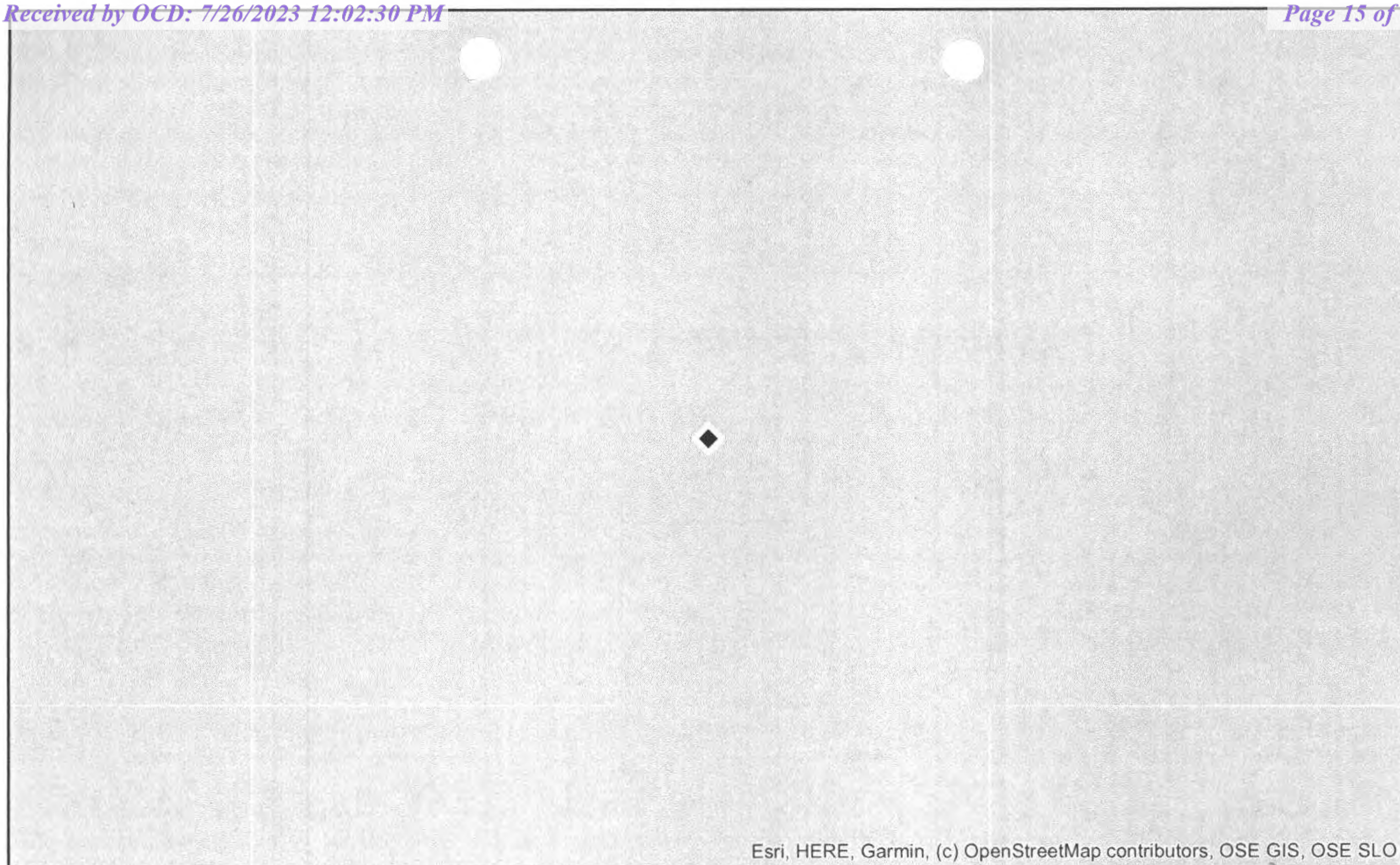
0 100 200

Feet

N

FIGURE 1
PROPOSED BOREHOLE AND MONITORING WELL LOCATIONS
JAMES RANCH UNIT 29 SWD
UNIT K SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918135_JAMES RANCH UNIT 29 SWD BATTERY_4833\012918135_FIG01_PROP BH AND MW_2019.mxd



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting **609543.026**

Northing **3579413.872**

State Plane - NAD 83 (f) - Zone E

Easting **694952.949**

Northing **490062.614**

Degrees Minutes Seconds

Latitude **32 : 20 : 46.600000**

Longitude **-103 : 50 : 9.290000**

Location pulled from Coordinate Search

NEW MEXICO OFFICE OF THE STATE ENGINEER

1:4,514

ft 0 90 180 360

N

YMENDIOLA 12/5/2019

Spatial Information

County: Eddy

Groundwater Basin: Carlsbad

Abstract Area: Carlsbad
Carlsbad Underground Basin

Land Grant:
Not in Land Grant

Restrictions:

NA

PLSS Description

NWSENESW Qtr of Sec 36 of 022S 030E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

Parcel Information

UPC/DocNum: 4-180-132-267-263

Parcel Owner: STATE OF NEW MEXICO

Address:

Legal: Quarter: NE S: 36 T: 22S R: 30E Quarter: NW S: 36 T: 22S R: 30E Quarter: SW S: 36 T: 22S R: 30E Quarter: SE S: 36 T: 22S R: 30E ALL MAP# 279-36 LOC E OF CARLSBAD EXEMPT

POD Information

Owner: STATE OF NM/XTO/LT ENVIRO

File Number: C- 4387

POD Status: NoData

Permit Status: NoData

Permit Use: NoData

Purpose: MONITOR SP-11

- Calculated PLSS
- Coord Search Location
- Federal Lands
- State Land
- Catron County Parcel Points 2017
- Guadalupe County Parcel Points 2018
- Mora County Parcel Points 2014
- Quay County Parcel Points 2018
- Union County Parcel Points 2017
- Bernalillo County Parcels 2018
- Chaves County Parcels 2018
- Cibola County Parcels 2018
- Colfax County Parcels 2018
- Curry County Parcels 2018
- Doña Ana County Parcels 2018
- De Baca County Parcels 2018
- Eddy County Parcels 2018
- Grant County Parcels 2017
- Harding County Parcels 2018
- Hidalgo County Parcels 2018
- Lea County Parcels 2018
- Lincoln County Parcels 2018
- Los Alamos County Parcels 2018
- Luna County Parcels 2018
- McKinley County Parcels 2017
- Otero County Parcels 2018
- Roosevelt County Parcels 2018
- Rio Arriba County Parcels 2018
- San Juan County Parcels 2018
- San Miguel County Parcels 2017
- Sandoval County Parcels 2018
- Santa Fe County Parcels 2018
- Sierra County Parcels 2017
- Socorro County Parcels 2018
- Taos County Parcels 2018
- Torrance County Parcels 2018
- Valencia County Parcels 2018
- Sections

John R. D Antonio, Jr., P.E.
State Engineer

Roswell Office
1900 WEST SECOND STREET
ROSWELL, NM 88201

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 663865
File Nbr: C 04387

Dec. 16, 2019

KYLE LITTRELL
XTO ENERGY INC
6401 HOLIDAY HILL ROAD
MIDLAND, TX 79707

Greetings:

Your approved copy of the above numbered permit to drill a well for non-consumptive purposes is enclosed. You must obtain an additional permit if you intend to use the water. It is your responsibility to provide the contracted well driller with a copy of the permit that must be made available during well drilling activities.

Carefully review the attached conditions of approval for all specific permit requirements.

* If use of this well is temporary in nature and the well will be plugged at the end of the well usage, the OSE must initially approve of the plugging. If plugging approval is not conditioned in this permit, the applicant must submit a Plugging Plan of Operations for approval prior to the well being plugged. The Plugging Record must be properly completed and submitted to the OSE within 30 days of the well plugging.

* If the final intended purpose and condition requires a well ID tag and meter installation, the applicant must immediately send a completed meter report form to this office.

* The well record and log must be submitted within 30 days of the completion of the well or if the attempt was a dry hole.

* This permit expires and will be cancelled if no well is drilled and/or a well log is not received by the date set forth in the conditions of approval.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us.

Sincerely,

for Juan Hernandez
(575)622-6521

Enclosure

explore

ENSOLUM

APPENDIX B

October 16, 2019 Closure Request

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

October 16, 2019

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

RE: Closure Request
James Ranch Unit #066
Remediation Permit Number 2RP-3500
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the James Ranch Unit #066 (Site) in Unit M, Section 36, Township 22 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

The release is included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The release is categorized as a Tier IV site in the Compliance Agreement, meaning the release occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

RELEASE BACKGROUND

On January 12, 2016, the wellhead stuffing box packing failed, causing fluid to spray onto the surface of the well pad. Approximately 6 barrels (bbls) of crude oil and 1.5 bbls of produced water were released, affecting approximately 5,470 square feet of the well pad. None of the released fluid was recovered. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on January 14, 2016, and was assigned Remediation Permit (RP) Number 2RP-3500 (Attachment 1).

Although the release occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Based

on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release event.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) Well 321946103492001, located approximately 6,552 feet southeast of the Site. The water well has a depth to groundwater of 144 feet and a total depth of 180 feet. Ground surface elevation at the water well location is 3,305 feet above mean sea level (AMSL), which is approximately 11 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a tributary located approximately 5,407 feet west-southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is 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, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On February 6, 2018, an LTE scientist collected five preliminary soil samples (SS1 through SS5) within the release area to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, the soil samples were collected from each sample location from a depth of 0.5 feet bgs. On April 19, 2018, LTE personnel returned to the site to collect additional soil samples from three of the preliminary soil sample locations to assess the vertical

extent of impacted soil in the release area. Soil samples SS1A, SS4A, and SS5A were collected from a depth of 1.3 feet bgs at the SS1, SS4, and SS5 soil sample locations.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The preliminary soil sample locations are depicted on Figure 2.

Between December 2018 and September 2019, LTE personnel returned to the Site to oversee site assessment and excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Potholes were advanced via backhoe at 3 locations within and around the release extent to a depth of 4 feet bgs to confirm the extent of soil impacts. Delineation soil samples were collected from each pothole at depths of 1 foot and 4 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole and delineation soil sample locations are depicted on Figure 3.

Impacted soil was excavated from the release area as indicated by visual observations, potholing activities, and laboratory analytical results for the preliminary soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 1 foot bgs. Composite soil samples FS01 through FS011 were collected from the floor of the excavation from depths ranging from 0.5 feet to 1 foot bgs. The excavation extent and excavation soil sample locations are depicted on Figure 4. The delineation and excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco Laboratories (Xenco) in Midland, Texas. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 3.

The excavation measured approximately 2,000 square feet in area with a depth of 0.5 feet to 1 foot bgs. A total of approximately 75 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS3, SS4, SS1A, SS2A, and SS5A. Laboratory analytical results indicated that TPH and/or GRO/DRO concentrations exceeded the Closure Criteria in preliminary soil samples SS1, SS2, and SS5. Based on the preliminary soil sample analytical results, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for excavation soil samples SW01 through SW03, SW05, and FS01 through FS011, collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation soil sample SW04 initially exceeded the Closure Criteria for GRO/DRO and TPH. Additional soil was removed from the area around SW04 and subsequent sidewall sample SW05 was compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH03, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Impacted soil was excavated from the release area to address impacts to soil resulting from a historical release of crude oil and produced water at the Site. Laboratory analytical results for the excavation soil samples collected from the final excavation extent indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed in and around the release extent. Laboratory analytical results for the delineation soil samples indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts, natural attenuation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-3500. XTO will backfill the excavations with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in 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.

Bryan Paraspolo
Project Environmental Scientist

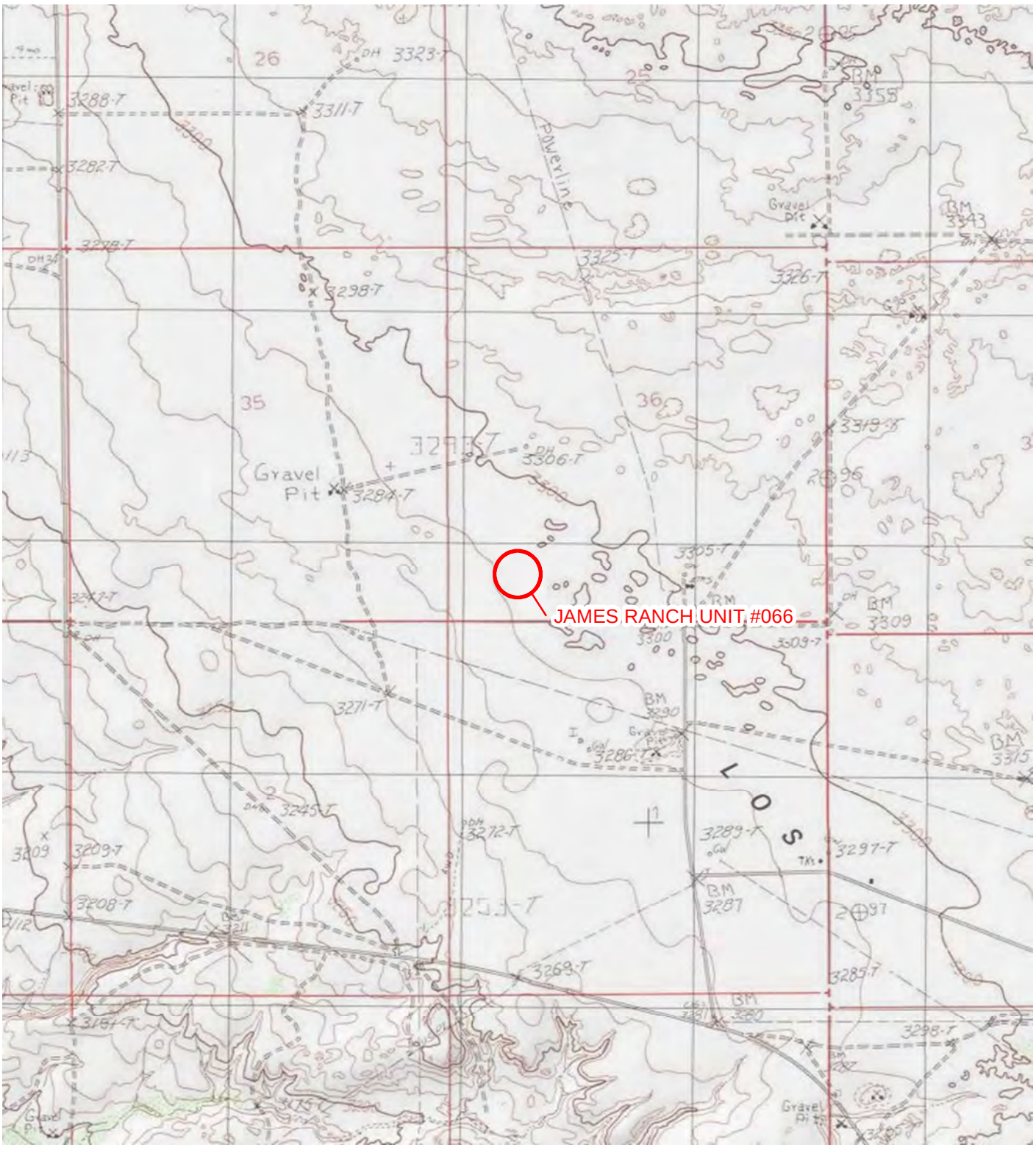
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-3500)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-3500

FIGURE 1
SITE LOCATION MAP
JAMES RANCH UNIT #066
UNIT M SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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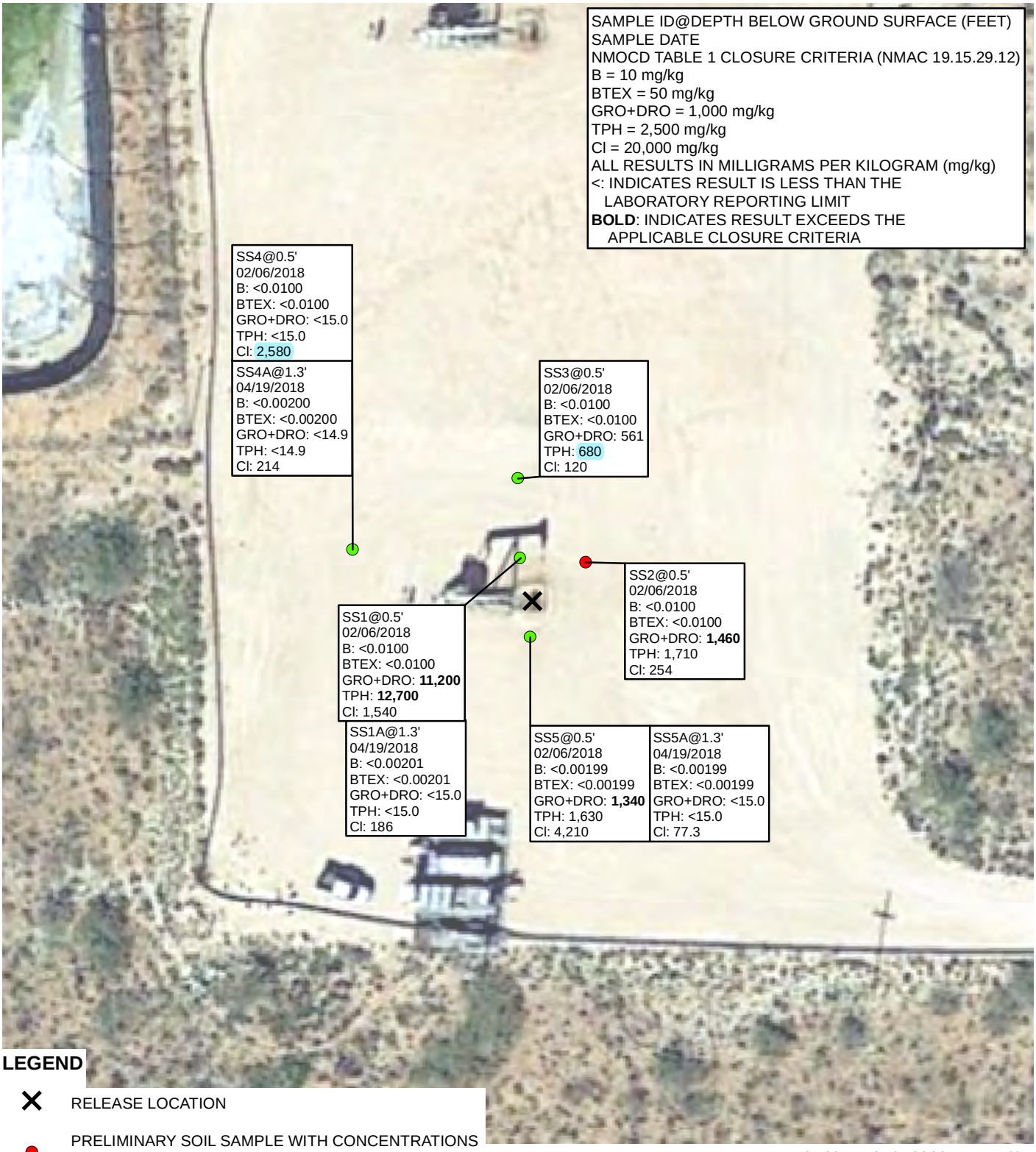

LEGEND

- ✕ RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

IMAGE COURTESY OF GOOGLE EARTH 2017

0 50 100
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3500

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #066
UNIT M SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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LEGEND

✕ RELEASE LOCATION

● DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

IMAGE COURTESY OF GOOGLE EARTH 2017

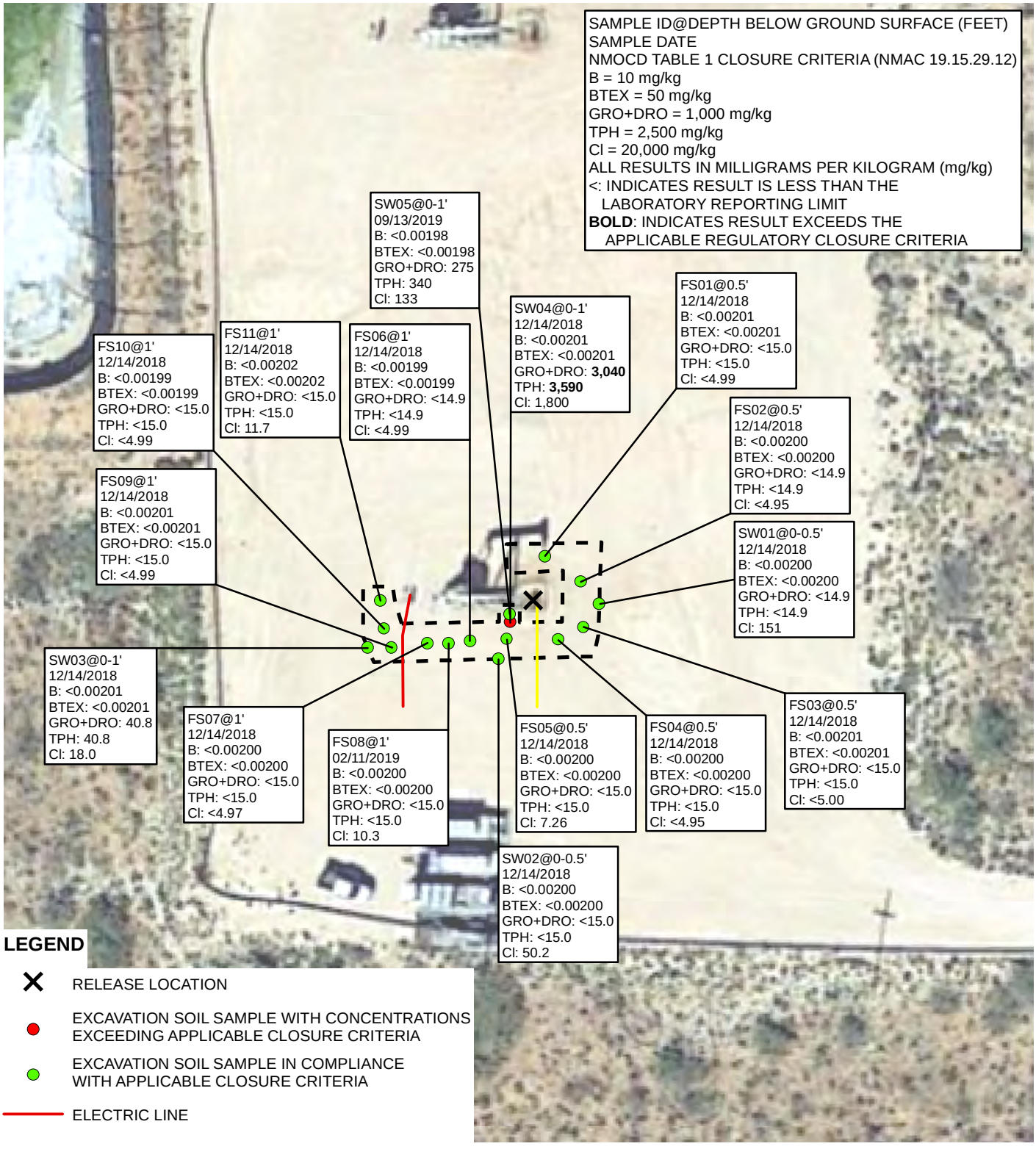
0 50 100
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3500

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #066
UNIT M SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918023_JRU 66\012918023_FIG03_DELINEATION_3500.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-3500

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #066
UNIT M SEC 36 T22S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918023_JRU 66\012918023_FIG04_EXCAVATION_3500.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #066
REMEDIATION PERMIT NUMBER 2RP-3500
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)
SS1	0.5	02/06/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<74.9	11,200	1,540	**11,200**	**12,700**	1,540
SS2	0.5	02/06/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	1,460	250	**1,460**	1,710	254
SS3	0.5	02/06/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<14.9	561	119	561	680	120
SS4	0.5	02/06/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	<15.0	<15.0	<15.0	<15.0	2,580
SS5	0.5	02/06/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	1,340	287	**1,340**	1,630	4,210
SS1A	1.3	04/19/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	186
SS4A	1.3	04/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	214
SS5A	1.3	04/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	77.3
PH01	1	06/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	15.4
PH02	1	06/06/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	20.4
PH03	1	06/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	148
PH01A	4	06/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	26.4
PH02A	4	06/06/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	176
PH03A	4	06/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	190
SW01	0 - 0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	151
SW02	0 - 0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	50.2
SW03	0 - 1	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	40.8	<15.0	40.8	40.8	18.0
SW04	0 - 1	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	3,040	553	**3,040**	**3,590**	1,800
SW05	0-1	09/13/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	275	65.3	275	340	133
FS01	0.5	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
FS02	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
FS03	0.5	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
FS04	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
FS05	0.5	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	7.26
FS06	1	12/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.99

TABLE 1
SOIL ANALYTICAL RESULTS

JAMES RANCH UNIT #066
REMEDIATION PERMIT NUMBER 2RP-3500
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)
FS07	1	12/14/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
FS09	1	12/14/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
FS10	1	12/14/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
FS11	1	12/14/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	11.7
FS08	1	02/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	10.3
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**

Notes:

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

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-3500)

NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 14 2016
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1600192715 2160737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: James Ranch Unit #066	Facility Type: Exploration and Production

Surface Owner: State of New Mexico	Mineral Owner: State of New Mexico	API No. 30-015-31065

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	36	22S	30E	660	South	990	West	Eddy

Latitude 32.34313° **Longitude** -103.83973°

NATURE OF RELEASE

Type of Release: Crude Oil/Produced Water	Volume of Release: 6 bbls Oil, 1.5 bbls PW	Volume Recovered: 0 bbls
Source of Release: Well head	Date and Hour of Occurrence: 1/12/2016 time unknown	Date and Hour of Discovery: 1/12/2016 at 1:30 pm
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
The well head stuffing box packing failed and fluid sprayed onto the well pad. E-Pot unit on the wellhead shut the pumping unit down. Well head and bull pen were washed and the packing was replaced.

Describe Area Affected and Cleanup Action Taken.*
The leak affected 5,470 ft² of well pad north of the well head. No standing fluids to recover.

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

Signature:

Printed Name: Amy C. Ruth

Title: Environmental Supervisor

E-mail Address: ACRuth@basspet.com

Date: 1/14/2016 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By:

Approval Date: 1/15/16 Expiration Date: N/A

Conditions of Approval: Attached ☐

Remediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 4/15/16

2RP-3500

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	2RP-3500
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3500
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.34313 Longitude -103.83973
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #066	Site Type Exploration and Production
Date Release Discovered 1/12/2016	API# *(if applicable) 30-015-31065*

Unit Letter	Section	Township	Range	County
M	36	22S	30E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 6	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 1.5	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
The wellhead stuffing box packing failed and fluid sprayed onto the well pad. E-Pot unit on the wellhead shut the pumping unit down. The leak affected 5,470 ft2 of well pad.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3500
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was less than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/16/2019

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-3500
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3500
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: 10/16/2019

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-3500
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: 10/16/2019

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

OCD Only

Received by: OCD Date: 7/26/2023

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: Ashley Maxwell Date: 8/17/2023

Printed Name: Ashley Maxwell Title: Environmental Specialist

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

Identifier: PH01	Date: 6/6/19
Project Name: JRU 66	RP Number: 2RP-3500
Logged By: GG	Method: EX
Lat/Long:	Field Screening: LTS/PID
Hole Diameter:	Total Depth: 4

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
0940 D-M	<180	1.4	N		1			Sand, dark brown, medplasticity w/some clay
0945 D-M	<180	0.3	N		2			sandy loam, dark brown, med plasticity
0950 D	<180	0.7	N		3			sandy loam, brown, medplasticity
0955 D	<180	0.4	N		4			sandy loam, light brown, med plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH02	6/6/19
Project Name:	RP Number:
JRU66	2RP-3500
Logged By: GG	Method: EX
Hole Diameter:	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CTS/PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1000 D	<180	0.0	N		1			Sandy loam, Dark brown, low plasticity
1005 D	<180	0.0	N		2			Sandy loam, Dark brown, Med plasticity
1010 D	<180	0.0	N		3			Sandy loam, dark brown, mod plasticity
1015 D	<180	0.0	N		4			caliche, off white - gray low plasticity
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH03	6/6/19
Project Name:	RP Number:
JRU66	2RP-3500
Logged By: GG	Method: EX
Hole Diameter:	Total Depth: 4'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: CTS/PID

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1025 D	180	0.0	N		0–1			sandyloam, Dark brown med plasticity
1030 D	<180	0.0	N		1–2			sandyloam, brown, med Plasticity
1035 D	<180	0.0	N		2–3			sandyloam, brown, med Plasticity
1040 D	180	0.0	N		3–4			sandyloam, brown, medplasticity

ATTACHMENT 3: PHOTOGRAPHIC LOG

View facing northeast of the excavation area south of the pumpjack.

Project: 012918023	XTO Energy, Inc. James Ranch Unit #066	LTE Advancing Opportunity
December 14, 2018	Photographic Log	

View facing northwest of the excavation area west of the pumpjack.

Project: 012918023	XTO Energy, Inc. James Ranch Unit #066	LTE Advancing Opportunity
December 14, 2018	Photographic Log	

View facing south of the excavation area east of the pumpjack.

Project: 012918023	XTO Energy, Inc. James Ranch Unit #066	LTE Advancing Opportunity
December 14, 2018	Photographic Log	

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 575588

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU #066/ 30-015-31065

08-JAN-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

08-JAN-19

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

Reference: XENCO Report No(s): **575588**
JRU #066/ 30-015-31065
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 575588. 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. 575588 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-06-18 16:20	6"	575588-001
SS2	S	02-06-18 16:22	6"	575588-002
SS3	S	02-06-18 16:24	6"	575588-003
SS4	S	02-06-18 16:26	6"	575588-004
SS5	S	02-06-18 16:28	6"	575588-005

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU #066/ 30-015-31065

Project ID:
Work Order Number(s): *575588*

Report Date: *08-JAN-19*
Date Received: *02/07/2018*

Sample receipt non conformances and comments:

Extra COC was scanned with final report, removed incorrect COC. NEW VERSION GENERATED. JK 01/08/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3040874 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3040877 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 575588

LT Environmental, Inc., Arvada, CO

Project Name: JRU #066/ 30-015-31065

Project Id:
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Wed Feb-07-18 08:00 am
Report Date: 08-JAN-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	575588-001		575588-002		575588-003		575588-004		575588-005	
	Field Id:	SS1		SS2		SS3		SS4		SS5	
	Depth:	6"-		6"-		6"-		6"-		6"-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Feb-06-18 16:20		Feb-06-18 16:22		Feb-06-18 16:24		Feb-06-18 16:26		Feb-06-18 16:28	
BTEX by EPA 8021B	***Extracted:***	Feb-10-18 10:00		Feb-10-18 10:00		Feb-10-18 10:00		Feb-10-18 10:00		Feb-12-18 08:00	
	Analyzed:	Feb-11-18 09:07		Feb-11-18 09:25		Feb-11-18 09:43		Feb-11-18 10:01		Feb-12-18 12:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
Toluene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
Ethylbenzene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
m,p-Xylenes		<0.0200	0.0200	<0.0200	0.0200	<0.0200	0.0200	<0.0200	0.0200	<0.00398	0.00398
o-Xylene		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
Total Xylenes		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
Total BTEX		<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.0100	0.0100	<0.00199	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Feb-14-18 15:00		Feb-14-18 15:00		Feb-14-18 15:00		Feb-14-18 15:00		Feb-14-18 15:00	
	Analyzed:	Feb-14-18 21:19		Feb-14-18 21:25		Feb-14-18 21:31		Feb-14-18 21:37		Feb-14-18 21:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1540	5.00	254	24.6	120	4.92	2580	24.7	4210	25.0
TPH by SW8015 Mod	***Extracted:***	Feb-10-18 14:00		Feb-10-18 14:00		Feb-10-18 14:00		Feb-10-18 11:00		Feb-10-18 11:00	
	Analyzed:	Feb-11-18 16:09		Feb-12-18 07:43		Feb-12-18 08:02		Feb-11-18 06:15		Feb-12-18 02:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<74.9	74.9	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		11200	74.9	1460	15.0	561	14.9	<15.0	15.0	1340	15.0
Oil Range Hydrocarbons (ORO)		1540	74.9	250	15.0	119	14.9	<15.0	15.0	287	15.0
Total TPH		12700	74.9	1710	15.0	680	14.9	<15.0	15.0	1630	15.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-001	Date Collected:	02.06.18 16.20	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1540**	5.00	mg/kg	02.14.18 21.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 14.00	Basis:	Wet Weight
Seq Number:	3040797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	02.11.18 16.09	U	5
Diesel Range Organics (DRO)	C10C28DRO	**11200**	74.9	mg/kg	02.11.18 16.09		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**1540**	74.9	mg/kg	02.11.18 16.09		5
Total TPH	PHC635	**12700**	74.9	mg/kg	02.11.18 16.09		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	02.11.18 16.09	
o-Terphenyl	84-15-1	79	%	70-135	02.11.18 16.09	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS1**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-001	Date Collected:	02.06.18 16.20	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.10.18 10.00	Basis:	Wet Weight
Seq Number:	3040877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.11.18 09.07	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.11.18 09.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	80-120	02.11.18 09.07	
1,4-Difluorobenzene	540-36-3	94	%	80-120	02.11.18 09.07	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-002	Date Collected:	02.06.18 16.22	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**254**	24.6	mg/kg	02.14.18 21.25		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 14.00	Basis:	Wet Weight
Seq Number:	3040797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 07.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1460**	15.0	mg/kg	02.12.18 07.43		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**250**	15.0	mg/kg	02.12.18 07.43		1
Total TPH	PHC635	**1710**	15.0	mg/kg	02.12.18 07.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	02.12.18 07.43	
o-Terphenyl	84-15-1	110	%	70-135	02.12.18 07.43	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS2**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-002	Date Collected:	02.06.18 16.22	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.10.18 10.00	Basis:	Wet Weight
Seq Number:	3040877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.11.18 09.25	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.11.18 09.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	80-120	02.11.18 09.25	
1,4-Difluorobenzene	540-36-3	82	%	80-120	02.11.18 09.25	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-003	Date Collected:	02.06.18 16.24	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	4.92	mg/kg	02.14.18 21.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 14.00	Basis:	Wet Weight
Seq Number:	3040797				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.12.18 08.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	**561**	14.9	mg/kg	02.12.18 08.02		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**119**	14.9	mg/kg	02.12.18 08.02		1
Total TPH	PHC635	**680**	14.9	mg/kg	02.12.18 08.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	02.12.18 08.02	
o-Terphenyl	84-15-1	86	%	70-135	02.12.18 08.02	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS3**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-003	Date Collected:	02.06.18 16.24	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.10.18 10.00	Basis:	Wet Weight
Seq Number:	3040877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.11.18 09.43	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.11.18 09.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	80-120	02.11.18 09.43	
1,4-Difluorobenzene	540-36-3	80	%	80-120	02.11.18 09.43	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-004	Date Collected:	02.06.18 16.26	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2580**	24.7	mg/kg	02.14.18 21.37		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 11.00	Basis:	Wet Weight
Seq Number:	3040795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.11.18 06.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.11.18 06.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	02.11.18 06.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.11.18 06.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.11.18 06.15	
o-Terphenyl	84-15-1	99	%	70-135	02.11.18 06.15	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS4**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-004	Date Collected:	02.06.18 16.26	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.10.18 10.00	Basis:	Wet Weight
Seq Number:	3040877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	02.11.18 10.01	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1
Total BTEX		<0.0100	0.0100	mg/kg	02.11.18 10.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	80-120	02.11.18 10.01	
1,4-Difluorobenzene	540-36-3	80	%	80-120	02.11.18 10.01	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-005	Date Collected:	02.06.18 16.28	Sample Depth:	6"

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	02.14.18 15.00	Basis:	Wet Weight
Seq Number:	3041126				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4210**	25.0	mg/kg	02.14.18 21.43		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.10.18 11.00	Basis:	Wet Weight
Seq Number:	3040795				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.12.18 02.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1340**	15.0	mg/kg	02.12.18 02.50		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**287**	15.0	mg/kg	02.12.18 02.50		1
Total TPH	PHC635	**1630**	15.0	mg/kg	02.12.18 02.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.12.18 02.50	
o-Terphenyl	84-15-1	104	%	70-135	02.12.18 02.50	

Certificate of Analytical Results 575588

LT Environmental, Inc., Arvada, CO

JRU #066/ 30-015-31065

Sample Id:	**SS5**	Matrix:	Soil	Date Received:	02.07.18 08.00
Lab Sample Id:	575588-005	Date Collected:	02.06.18 16.28	Sample Depth:	6"
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	02.12.18 08.00	Basis:	Wet Weight
Seq Number:	3040874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.12.18 12.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.12.18 12.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.12.18 12.12	
4-Bromofluorobenzene	460-00-4	112	%	80-120	02.12.18 12.12	

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 575588

LT Environmental, Inc.

JRU #066/ 30-015-31065

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041126 Matrix: Solid Date Prep: 02.14.18
MB Sample Id: 7639163-1-BLK LCS Sample Id: 7639163-1-BKS LCSD Sample Id: 7639163-1-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	272	109	273	109	90-110	0	20	mg/kg	02.14.18 18:50	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041126 Matrix: Soil Date Prep: 02.14.18
Parent Sample Id: 575585-003 MS Sample Id: 575585-003 S MSD Sample Id: 575585-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	279	114	285	116	90-110	2	20	mg/kg	02.14.18 19:08	X

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3041126 Matrix: Soil Date Prep: 02.14.18
Parent Sample Id: 575587-002 MS Sample Id: 575587-002 S MSD Sample Id: 575587-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	451	250	683	93	700	100	90-110	2	20	mg/kg	02.14.18 20:31	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3040795 Matrix: Solid Date Prep: 02.10.18
MB Sample Id: 7638962-1-BLK LCS Sample Id: 7638962-1-BKS LCSD Sample Id: 7638962-1-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	952	95	813	81	70-135	16	35	mg/kg	02.10.18 21:55	
Diesel Range Organics (DRO)	<15.0	1000	1090	109	929	93	70-135	16	35	mg/kg	02.10.18 21:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		107		94		70-135	%	02.10.18 21:55
o-Terphenyl	99		112		97		70-135	%	02.10.18 21:55

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

QC Summary 575588

LT Environmental, Inc.

JRU #066/ 30-015-31065

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3040797 — Matrix: Solid — Date Prep: 02.10.18
MB Sample Id: 7638963-1-BLK — LCS Sample Id: 7638963-1-BKS — LCSD Sample Id: 7638963-1-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	934	93	904	90	70-135	3	35	mg/kg	02.11.18 07:36	
Diesel Range Organics (DRO)	<15.0	1000	1060	106	1010	101	70-135	5	35	mg/kg	02.11.18 07:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		107		100		70-135	%	02.11.18 07:36
o-Terphenyl	95		110		101		70-135	%	02.11.18 07:36

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3040795 — Matrix: Soil — Date Prep: 02.10.18
Parent Sample Id: 575575-001 — MS Sample Id: 575575-001 S — MSD Sample Id: 575575-001 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	1000	978	98	990	99	70-135	1	35	mg/kg	02.10.18 22:55	
Diesel Range Organics (DRO)	103	1000	1090	99	1100	100	70-135	1	35	mg/kg	02.10.18 22:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		105		70-135	%	02.10.18 22:55
o-Terphenyl	111		107		70-135	%	02.10.18 22:55

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3040797 — Matrix: Soil — Date Prep: 02.10.18
Parent Sample Id: 575581-001 — MS Sample Id: 575581-001 S — MSD Sample Id: 575581-001 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	998	968	97	898	90	70-135	8	35	mg/kg	02.11.18 08:37	
Diesel Range Organics (DRO)	26.9	998	1090	107	1000	98	70-135	9	35	mg/kg	02.11.18 08:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		98		70-135	%	02.11.18 08:37
o-Terphenyl	105		95		70-135	%	02.11.18 08:37

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

QC Summary 575588

LT Environmental, Inc.

JRU #066/ 30-015-31065

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3040877 — Matrix: Solid — Date Prep: 02.10.18
MB Sample Id: 7638897-1-BLK — LCS Sample Id: 7638897-1-BKS — LCSD Sample Id: 7638897-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0951	94	0.0838	84	70-130	13	35	mg/kg	02.11.18 01:41	
Toluene	<0.00202	0.101	0.0872	86	0.0814	81	70-130	7	35	mg/kg	02.11.18 01:41	
Ethylbenzene	<0.00202	0.101	0.0901	89	0.0837	84	71-129	7	35	mg/kg	02.11.18 01:41	
m,p-Xylenes	<0.00403	0.202	0.175	87	0.163	82	70-135	7	35	mg/kg	02.11.18 01:41	
o-Xylene	<0.00202	0.101	0.0909	90	0.0839	84	71-133	8	35	mg/kg	02.11.18 01:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		87		91		80-120	%	02.11.18 01:41
4-Bromofluorobenzene	86		118		111		80-120	%	02.11.18 01:41

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3040874 — Matrix: Solid — Date Prep: 02.12.18
MB Sample Id: 7639015-1-BLK — LCS Sample Id: 7639015-1-BKS — LCSD Sample Id: 7639015-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0928	93	0.0935	94	70-130	1	35	mg/kg	02.12.18 08:15	
Toluene	<0.00199	0.0994	0.0974	98	0.0987	99	70-130	1	35	mg/kg	02.12.18 08:15	
Ethylbenzene	<0.00199	0.0994	0.108	109	0.110	110	71-129	2	35	mg/kg	02.12.18 08:15	
m,p-Xylenes	<0.00398	0.199	0.213	107	0.217	109	70-135	2	35	mg/kg	02.12.18 08:15	
o-Xylene	<0.00199	0.0994	0.105	106	0.106	106	71-133	1	35	mg/kg	02.12.18 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		89		85		80-120	%	02.12.18 08:15
4-Bromofluorobenzene	98		115		120		80-120	%	02.12.18 08:15

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3040877 — Matrix: Soil — Date Prep: 02.10.18
Parent Sample Id: 575485-018 — MS Sample Id: 575485-018 S — MSD Sample Id: 575485-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0483	49	0.0603	60	70-130	22	35	mg/kg	02.11.18 02:18	X
Toluene	<0.00199	0.0994	0.0454	46	0.0619	62	70-130	31	35	mg/kg	02.11.18 02:18	X
Ethylbenzene	<0.00199	0.0994	0.0471	47	0.0634	64	71-129	30	35	mg/kg	02.11.18 02:18	X
m,p-Xylenes	<0.00398	0.199	0.0904	45	0.120	60	70-135	28	35	mg/kg	02.11.18 02:18	X
o-Xylene	<0.00199	0.0994	0.0484	49	0.0628	63	71-133	26	35	mg/kg	02.11.18 02:18	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		86		80-120	%	02.11.18 02:18
4-Bromofluorobenzene	100		113		80-120	%	02.11.18 02:18

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

QC Summary 575588

LT Environmental, Inc.

JRU #066/ 30-015-31065

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

Seq Number: 3040874 Matrix: Soil Date Prep: 02.12.18

Parent Sample Id: 575585-001 MS Sample Id: 575585-001 S MSD Sample Id: 575585-001 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	0.0998	0.0837	84	0.0842	84	70-130	1	35	mg/kg	02.12.18 09:00	
Toluene	<0.00200	0.0998	0.0878	88	0.0898	90	70-130	2	35	mg/kg	02.12.18 09:00	
Ethylbenzene	<0.00200	0.0998	0.0959	96	0.0976	98	71-129	2	35	mg/kg	02.12.18 09:00	
m,p-Xylenes	<0.00399	0.200	0.190	95	0.192	96	70-135	1	35	mg/kg	02.12.18 09:00	
o-Xylene	<0.00200	0.0998	0.0920	92	0.0960	96	71-133	4	35	mg/kg	02.12.18 09:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		85		80-120	%	02.12.18 09:00
4-Bromofluorobenzene	116		115		80-120	%	02.12.18 09:00

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	

XENCO LABORATORIES

Setting the Standard since 1990

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
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www.xenco.com

Xenco Quote #

Xenco Job # 575588

Client / Reporting Information

Company Name / Branch: LTE / Permian

Company Address: 3300 N. A street Bldg 1 Suite 103

Email: Abaker@LTenv.com Phone No: 432-704-5178

Project Contact: Adrian Baker

Samplers's Name: Aaron Williamson

Project Information

Project Name/Number: JRU#066 / 30-015-31065

Project Location: NM

Invoice To: XTO Energy - Kyler Littrell

PO Number: 30 015 31065

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Btex Method 8021	TPH Method 8015	Chloride Method 300.1	Field Comments
1	SS1	6"	2/6/18	16:20	S	1									X	X	X	
2	SS2			16:22											X	X	X	
3	SS3			16:24											X	X	X	
4	SS4			16:26											X	X	X	
5	SS5			16:28											X	X	X	
6																		
7																		
8																		
9																		
10	NFE AQW																	

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY — Standard tat

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

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ Level II Report with TRRP checklist

Temp: 4 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 3.8

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		2/6/18 17:45	1	2	2/7/18 8:40 AM	2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☒ Cooler Temp. Thermo. Corr. Factor

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/07/2018 08:00:00 AM

Work Order #: 575588

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)?	3.8
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 02/07/2018

Checklist reviewed by: Jessica Kramer Date: 02/07/2018

Jessica Kramer

Certificate of Analysis Summary 583283

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

Project Id: (2RP-3500)
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Apr-23-18 08:33 am
Report Date: 27-APR-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	583283-001		583283-002		583283-003			
	Field Id:	SS5A		SS4A		SS1A			
	Depth:	16- In		16- In		16- In			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Apr-19-18 14:30		Apr-19-18 15:00		Apr-19-18 15:45			
BTEX by EPA 8021B	***Extracted:***	Apr-24-18 13:00		Apr-24-18 13:00		Apr-24-18 13:00			
	Analyzed:	Apr-24-18 20:41		Apr-24-18 21:00		Apr-24-18 21:20			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
m,p-Xylenes		<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402		
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201		
Chloride by EPA 300	***Extracted:***	Apr-26-18 12:00		Apr-26-18 12:00		Apr-26-18 12:00			
	Analyzed:	Apr-26-18 14:11		Apr-26-18 14:22		Apr-26-18 14:53			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		77.3	4.95	214	4.95	186	4.98		
TPH By SW8015 Mod	***Extracted:***	Apr-24-18 14:00		Apr-24-18 14:00		Apr-24-18 14:00			
	Analyzed:	Apr-24-18 17:10		Apr-24-18 18:28		Apr-24-18 18:52			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0		
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<14.9	14.9	<15.0	15.0		
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0		

Jessica Kramer
Project Assistant

Analytical Report 583283

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 66

(2RP-3500)

27-APR-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-14)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

27-APR-18

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

Reference: XENCO Report No(s): **583283**
JRU 66
Project Address: NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 583283. 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. 583283 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS5A	S	04-19-18 14:30	16 In	583283-001
SS4A	S	04-19-18 15:00	16 In	583283-002
SS1A	S	04-19-18 15:45	16 In	583283-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 66

Project ID: *(2RP-3500)*
Work Order Number(s): *583283*

Report Date: *27-APR-18*
Date Received: *04/23/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3047816 BTEX by EPA 8021B

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

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-001	Date Collected:	04.19.18 14.30	Sample Depth:	16 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 12.00	Basis:	Wet Weight
Seq Number:	3048097				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.3**	4.95	mg/kg	04.26.18 14.11		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.24.18 14.00	Basis:	Wet Weight
Seq Number:	3047856				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.24.18 17.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.24.18 17.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.24.18 17.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.24.18 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	04.24.18 17.10	
o-Terphenyl	84-15-1	114	%	70-135	04.24.18 17.10	

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-001	Date Collected:	04.19.18 14.30	Sample Depth:	16 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	04.24.18 13.00	Basis:	Wet Weight
Seq Number:	3047816				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.24.18 20.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.24.18 20.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.24.18 20.41	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.24.18 20.41	

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS4A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-002	Date Collected:	04.19.18 15.00	Sample Depth:	16 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 12.00	Basis:	Wet Weight
Seq Number:	3048097				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**214**	4.95	mg/kg	04.26.18 14.22		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.24.18 14.00	Basis:	Wet Weight
Seq Number:	3047856				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.24.18 18.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.24.18 18.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	04.24.18 18.28	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.24.18 18.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.24.18 18.28	
o-Terphenyl	84-15-1	105	%	70-135	04.24.18 18.28	

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS4A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-002	Date Collected:	04.19.18 15.00	Sample Depth:	16 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	04.24.18 13.00	Basis:	Wet Weight
Seq Number:	3047816				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.24.18 21.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.24.18 21.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.24.18 21.00	
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.24.18 21.00	

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-003	Date Collected:	04.19.18 15.45	Sample Depth:	16 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	SCM	Date Prep:	04.26.18 12.00	Basis:	Wet Weight
Seq Number:	3048097				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**186**	4.98	mg/kg	04.26.18 14.53		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.24.18 14.00	Basis:	Wet Weight
Seq Number:	3047856				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.24.18 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.24.18 18.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	04.24.18 18.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.24.18 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	04.24.18 18.52	
o-Terphenyl	84-15-1	113	%	70-135	04.24.18 18.52	

Certificate of Analytical Results 583283

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	04.23.18 08.33
Lab Sample Id:	583283-003	Date Collected:	04.19.18 15.45	Sample Depth:	16 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	04.24.18 13.00	Basis:	Wet Weight
Seq Number:	3047816				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.24.18 21.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.24.18 21.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	04.24.18 21.20	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.24.18 21.20	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 583283

LT Environmental, Inc.

JRU 66

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Solid — Date Prep: 04.26.18
MB Sample Id: 7643501-1-BLK — LCS Sample Id: 7643501-1-BKS — LCSD Sample Id: 7643501-1-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	239	96	237	95	90-110	1	20	mg/kg	04.26.18 12:59	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Soil — Date Prep: 04.26.18
Parent Sample Id: 583233-001 — MS Sample Id: 583233-001 S — MSD Sample Id: 583233-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.8	250	257	90	255	89	90-110	1	20	mg/kg	04.26.18 13:30	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3048097 — Matrix: Soil — Date Prep: 04.26.18
Parent Sample Id: 583452-017 — MS Sample Id: 583452-017 S — MSD Sample Id: 583452-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	198	249	440	97	440	97	90-110	0	20	mg/kg	04.26.18 15:55	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3047856 — Matrix: Solid — Date Prep: 04.24.18
MB Sample Id: 7643390-1-BLK — LCS Sample Id: 7643390-1-BKS — LCSD Sample Id: 7643390-1-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	942	94	70-135	1	20	mg/kg	04.24.18 16:06	
Diesel Range Organics (DRO)	<15.0	1000	1020	102	1010	101	70-135	1	20	mg/kg	04.24.18 16:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		113		112		70-135	%	04.24.18 16:06
o-Terphenyl	99		113		110		70-135	%	04.24.18 16:06

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 583283

LT Environmental, Inc.

JRU 66

Analytical Method: TPH By SW8015 Mod | Prep Method: TX1005P
Seq Number: 3047856 | Matrix: Soil | Date Prep: 04.24.18
Parent Sample Id: 583283-001 | MS Sample Id: 583283-001 S | MSD Sample Id: 583283-001 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	998	950	95	1030	103	70-135	8	20	mg/kg	04.24.18 17:37	
Diesel Range Organics (DRO)	<15.0	998	982	98	1060	106	70-135	8	20	mg/kg	04.24.18 17:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		122		70-135	%	04.24.18 17:37
o-Terphenyl	109		117		70-135	%	04.24.18 17:37

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3047816 | Matrix: Solid | Date Prep: 04.24.18
MB Sample Id: 7643366-1-BLK | LCS Sample Id: 7643366-1-BKS | LCSD Sample Id: 7643366-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.115	114	0.114	114	70-130	1	35	mg/kg	04.24.18 17:48	
Toluene	<0.00202	0.101	0.109	108	0.108	108	70-130	1	35	mg/kg	04.24.18 17:48	
Ethylbenzene	<0.00202	0.101	0.110	109	0.108	108	70-130	2	35	mg/kg	04.24.18 17:48	
m,p-Xylenes	<0.00403	0.202	0.226	112	0.224	112	70-130	1	35	mg/kg	04.24.18 17:48	
o-Xylene	<0.00202	0.101	0.114	113	0.112	112	70-130	2	35	mg/kg	04.24.18 17:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		108		109		70-130	%	04.24.18 17:48
4-Bromofluorobenzene	89		102		93		70-130	%	04.24.18 17:48

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3047816 | Matrix: Soil | Date Prep: 04.24.18
Parent Sample Id: 583285-001 | MS Sample Id: 583285-001 S | MSD Sample Id: 583285-001 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	0.0998	0.0983	98	0.0878	88	70-130	11	35	mg/kg	04.24.18 18:27	
Toluene	<0.00200	0.0998	0.0934	94	0.0824	82	70-130	13	35	mg/kg	04.24.18 18:27	
Ethylbenzene	<0.00200	0.0998	0.0937	94	0.0796	80	70-130	16	35	mg/kg	04.24.18 18:27	
m,p-Xylenes	<0.00399	0.200	0.192	96	0.162	81	70-130	17	35	mg/kg	04.24.18 18:27	
o-Xylene	<0.00200	0.0998	0.0977	98	0.0834	83	70-130	16	35	mg/kg	04.24.18 18:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		109		70-130	%	04.24.18 18:27
4-Bromofluorobenzene	106		103		70-130	%	04.24.18 18:27

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

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

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

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

XENCO LABORATORIES

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

CHAIN OF CUSTODY

Page __ Of __

Xenco Quote # | Xenco Job # 583283

Client / Reporting Information

Company Name / Branch: LTE/Midland
Company Address: 3300 North A Street Building 1, Unit #103, Midland, Texas
Email: abaker@ltenv.com | Phone No: 439-894-5641
Project Contact: Adrian Baker
Samplers's Name: Eric Carroll

Project Information

Project Name/Number: JRU 66
Project Location: NM
Invoice To: Kyle Littrell, XTO Energy
PO Number: 30-015-31065 (2RP-3500)

Analytical Information

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	SS5A	16"	4/19/16	1430	S	1								X	X	X	X	
2	SS4A	↓	↓	1500	S	1								X	X	X	X	
3	SS1A	↓	↓	1545	S	1								X	X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Eric Carroll	4/20 9:30	Esperanza Gonzalez			
2				Esperanza Gonzalez	4/20 12:55	
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						0.5

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04/23/2018 08:33:00 AM

Work Order #: 583283

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 04/23/2018

Checklist reviewed by: Jessica Kramer Date: 04/23/2018

Jessica Kramer

Analytical Report 609033

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 66

31-DEC-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

31-DEC-18

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

Reference: XENCO Report No(s): **609033**
JRU 66
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 609033. 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. 609033 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

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

Sample Cross Reference 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-14-18 15:30	0.5 ft	609033-001
FS02	S	12-14-18 15:35	0.5 ft	609033-002
FS03	S	12-14-18 15:40	0.5 ft	609033-003
FS04	S	12-14-18 15:45	0.5 ft	609033-004
FS05	S	12-14-18 15:50	0.5 ft	609033-005
FS06	S	12-14-18 15:55	1 ft	609033-006
FS07	S	12-14-18 16:00	1 ft	609033-007
FS09	S	12-14-18 16:15	1 ft	609033-009
FS10	S	12-14-18 16:25	1 ft	609033-010
FS11	S	12-14-18 16:35	1 ft	609033-011
SW01	S	12-14-18 16:45	0 - .5 ft	609033-012
SW02	S	12-14-18 16:50	0 - .5 ft	609033-013
SW03	S	12-14-18 17:00	0 - 1 ft	609033-014
SW04	S	12-14-18 10:07	0 - 1 ft	609033-015
FS08	S	12-14-18 16:10	1 ft	Not Analyzed

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 66

Project ID:
Work Order Number(s): *609033*

Report Date: *31-DEC-18*
Date Received: *12/18/2018*

Sample receipt non conformances and comments:

Per clients email request corrected sample 015 (SW04) sample date from 12/18/18 to 12/14/18. NEW VERSION GENERATED JKR 12/31/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3073519 Inorganic Anions by EPA 300
Chloride recovered above QC limits in the laboratory control sample. Samples in the analytical batch are: 609033-001, -002, -003, -004, -005, -006, -007, -009, -010, -011, -012, -013, -014, -015.

Compound(s) reported above QC limits for the Blank Spike and Blank Spike Duplicate. Batch passes in accordance to Marginal Exceedence (NELAC Quality Systems, Appendix D). Daily CCV and ICV are within QC Limits. Sample data reported as valid.

Batch: LBA-3073528 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3073531 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 609033

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Dec-18-18 12:31 pm
Report Date: 31-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	609033-001		609033-002		609033-003		609033-004		609033-005		609033-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-14-18 15:30		Dec-14-18 15:35		Dec-14-18 15:40		Dec-14-18 15:45		Dec-14-18 15:50		Dec-14-18 15:55	
BTEX by EPA 8021B	*Extracted:*	Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 12:00	
	Analyzed:	Dec-19-18 20:51		Dec-19-18 21:10		Dec-19-18 21:29		Dec-19-18 21:48		Dec-19-18 22:07		Dec-19-18 22:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00402	0.00402	<0.00400	0.00400	<0.00401	0.00401	<0.00398	0.00398
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300	*Extracted:*	Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30	
	Analyzed:	Dec-20-18 02:41		Dec-20-18 02:47		Dec-20-18 02:53		Dec-20-18 02:59		Dec-20-18 03:05		Dec-20-18 03:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	<4.95	4.95	<5.00	5.00	<4.95	4.95	7.26	4.95	<4.99	4.99
TPH by SW8015 Mod	*Extracted:*	Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00	
	Analyzed:	Dec-25-18 21:33		Dec-25-18 22:39		Dec-25-18 23:01		Dec-25-18 23:23		Dec-25-18 23:45		Dec-26-18 00:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analysis Summary 609033

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Dec-18-18 12:31 pm
Report Date: 31-DEC-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	609033-007		609033-009		609033-010		609033-011		609033-012		609033-013	
	Field Id:	FS07		FS09		FS10		FS11		SW01		SW02	
	Depth:	1- ft		1- ft		1- ft		1- ft		0-.5 ft		0-.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-14-18 16:00		Dec-14-18 16:15		Dec-14-18 16:25		Dec-14-18 16:35		Dec-14-18 16:45		Dec-14-18 16:50	
BTEX by EPA 8021B	***Extracted:***	Dec-19-18 12:00		Dec-19-18 12:00		Dec-19-18 14:00		Dec-19-18 14:00		Dec-19-18 14:00		Dec-19-18 14:00	
	Analyzed:	Dec-19-18 22:45		Dec-19-18 23:04		Dec-20-18 01:53		Dec-20-18 02:12		Dec-20-18 02:31		Dec-20-18 02:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00400	0.00400	<0.00402	0.00402	<0.00398	0.00398	<0.00403	0.00403	<0.00400	0.00400	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	***Extracted:***	Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30		Dec-19-18 16:30	
	Analyzed:	Dec-20-18 03:30		Dec-20-18 03:36		Dec-20-18 04:00		Dec-20-18 04:06		Dec-20-18 04:12		Dec-20-18 04:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.97	4.97	<4.99	4.99	<4.99	4.99	11.7	4.96	151	4.95	50.2	4.97
TPH by SW8015 Mod	***Extracted:***	Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00		Dec-25-18 08:00	
	Analyzed:	Dec-26-18 00:29		Dec-26-18 00:51		Dec-26-18 01:13		Dec-26-18 01:35		Dec-26-18 02:41		Dec-26-18 03:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 609033

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

Project Id:
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Dec-18-18 12:31 pm
Report Date: 31-DEC-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	609033-014		609033-015					
	Field Id:	SW03		SW04					
	Depth:	0-1 ft		0-1 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-14-18 17:00		Dec-14-18 10:07					
BTEX by EPA 8021B	***Extracted:***	Dec-19-18 14:00		Dec-19-18 14:00					
	Analyzed:	Dec-20-18 03:09		Dec-20-18 03:28					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00201	0.00201				
Toluene		<0.00201	0.00201	<0.00201	0.00201				
Ethylbenzene		<0.00201	0.00201	<0.00201	0.00201				
m,p-Xylenes		<0.00402	0.00402	<0.00402	0.00402				
o-Xylene		<0.00201	0.00201	<0.00201	0.00201				
Total Xylenes		<0.00201	0.00201	<0.00201	0.00201				
Total BTEX		<0.00201	0.00201	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Dec-19-18 16:30		Dec-19-18 16:30					
	Analyzed:	Dec-20-18 04:24		Dec-20-18 04:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		18.0	4.99	1800	24.8				
TPH by SW8015 Mod	***Extracted:***	Dec-25-18 08:00		Dec-25-18 08:00					
	Analyzed:	Dec-26-18 03:25		Dec-26-18 03:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		40.8	15.0	3040	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	553	15.0				
Total TPH		40.8	15.0	3590	15.0				

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Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-001	Date Collected:	12.14.18 15.30	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	12.20.18 02.41	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 21.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 21.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 21.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 21.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.25.18 21.33	
o-Terphenyl	84-15-1	84	%	70-135	12.25.18 21.33	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-001	Date Collected:	12.14.18 15.30	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 20.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 20.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	12.19.18 20.51	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.19.18 20.51	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-002	Date Collected:	12.14.18 15.35	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	12.20.18 02.47	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.25.18 22.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.25.18 22.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.25.18 22.39	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.25.18 22.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.25.18 22.39	
o-Terphenyl	84-15-1	99	%	70-135	12.25.18 22.39	

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LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-002	Date Collected:	12.14.18 15.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.19.18 21.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 21.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.19.18 21.10	
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.19.18 21.10	

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LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id: **FS03** Matrix: Soil Date Received:12.18.18 12.31

Lab Sample Id: 609033-003 Date Collected: 12.14.18 15.40 Sample Depth: 0.5 ft

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.19.18 16.30 Basis: Wet Weight

Seq Number: 3073519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	12.20.18 02.53	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.25.18 08.00 Basis: Wet Weight

Seq Number: 3074144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.25.18 23.01	
o-Terphenyl	84-15-1	98	%	70-135	12.25.18 23.01	

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LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-003	Date Collected:	12.14.18 15.40	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 21.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 21.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.19.18 21.29	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.19.18 21.29	

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LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id: **FS04** Matrix: Soil Date Received:12.18.18 12.31

Lab Sample Id: 609033-004 Date Collected: 12.14.18 15.45 Sample Depth: 0.5 ft

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.19.18 16.30 Basis: Wet Weight

Seq Number: 3073519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	12.20.18 02.59	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.25.18 08.00 Basis: Wet Weight

Seq Number: 3074144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 23.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 23.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 23.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 23.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	12.25.18 23.23	
o-Terphenyl	84-15-1	80	%	70-135	12.25.18 23.23	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-004	Date Collected:	12.14.18 15.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.19.18 21.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 21.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.19.18 21.48	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.19.18 21.48	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-005	Date Collected:	12.14.18 15.50	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.26**	4.95	mg/kg	12.20.18 03.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.25.18 23.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.25.18 23.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.25.18 23.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.25.18 23.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	12.25.18 23.45	
o-Terphenyl	84-15-1	84	%	70-135	12.25.18 23.45	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-005	Date Collected:	12.14.18 15.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.19.18 22.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 22.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	12.19.18 22.07	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.19.18 22.07	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-006	Date Collected:	12.14.18 15.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	12.20.18 03.12	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.26.18 00.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.26.18 00.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.26.18 00.07	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.26.18 00.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	12.26.18 00.07	
o-Terphenyl	84-15-1	79	%	70-135	12.26.18 00.07	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-006	Date Collected:	12.14.18 15.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.19.18 22.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.19.18 22.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	12.19.18 22.26	
1,4-Difluorobenzene	540-36-3	106	%	70-130	12.19.18 22.26	

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JRU 66

Sample Id: **FS07** Matrix: Soil Date Received:12.18.18 12.31

Lab Sample Id: 609033-007 Date Collected: 12.14.18 16.00 Sample Depth: 1 ft

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.19.18 16.30 Basis: Wet Weight

Seq Number: 3073519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	12.20.18 03.30	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.25.18 08.00 Basis: Wet Weight

Seq Number: 3074144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 00.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.26.18 00.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 00.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.26.18 00.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	12.26.18 00.29	
o-Terphenyl	84-15-1	82	%	70-135	12.26.18 00.29	

Certificate of Analytical Results 609033

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JRU 66

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-007	Date Collected:	12.14.18 16.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.19.18 22.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.19.18 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.19.18 22.45	
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.19.18 22.45	

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JRU 66

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-009	Date Collected:	12.14.18 16.15	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	12.20.18 03.36	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.26.18 00.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 00.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.26.18 00.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.26.18 00.51	
o-Terphenyl	84-15-1	98	%	70-135	12.26.18 00.51	

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JRU 66

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-009	Date Collected:	12.14.18 16.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 12.00	Basis:	Wet Weight
Seq Number:	3073531				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.19.18 23.04	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.19.18 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.19.18 23.04	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.19.18 23.04	

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JRU 66

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-010	Date Collected:	12.14.18 16.25	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	12.20.18 04.00	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 01.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.26.18 01.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 01.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.26.18 01.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.26.18 01.13	
o-Terphenyl	84-15-1	99	%	70-135	12.26.18 01.13	

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JRU 66

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-010	Date Collected:	12.14.18 16.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.20.18 01.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.20.18 01.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	12.20.18 01.53	
1,4-Difluorobenzene	540-36-3	108	%	70-130	12.20.18 01.53	

Certificate of Analytical Results 609033

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JRU 66

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-011	Date Collected:	12.14.18 16.35	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.7**	4.96	mg/kg	12.20.18 04.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 01.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.26.18 01.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 01.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.26.18 01.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	12.26.18 01.35	
o-Terphenyl	84-15-1	83	%	70-135	12.26.18 01.35	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-011	Date Collected:	12.14.18 16.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.20.18 02.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.20.18 02.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.20.18 02.12	
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.20.18 02.12	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id: **SW01** Matrix: Soil Date Received:12.18.18 12.31

Lab Sample Id: 609033-012 Date Collected: 12.14.18 16.45 Sample Depth: 0 - .5 ft

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.19.18 16.30 Basis: Wet Weight

Seq Number: 3073519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**151**	4.95	mg/kg	12.20.18 04.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.25.18 08.00 Basis: Wet Weight

Seq Number: 3074144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	12.26.18 02.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	12.26.18 02.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	12.26.18 02.41	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	12.26.18 02.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	12.26.18 02.41	
o-Terphenyl	84-15-1	88	%	70-135	12.26.18 02.41	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-012	Date Collected:	12.14.18 16.45	Sample Depth:	0 - .5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	12.20.18 02.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	12.20.18 02.31	
4-Bromofluorobenzene	460-00-4	96	%	70-130	12.20.18 02.31	

Certificate of Analytical Results 609033

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JRU 66

Sample Id: **SW02** Matrix: Soil Date Received:12.18.18 12.31

Lab Sample Id: 609033-013 Date Collected: 12.14.18 16.50 Sample Depth: 0 - .5 ft

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

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 12.19.18 16.30 Basis: Wet Weight

Seq Number: 3073519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**50.2**	4.97	mg/kg	12.20.18 04.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 12.25.18 08.00 Basis: Wet Weight

Seq Number: 3074144

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 03.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	12.26.18 03.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 03.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	12.26.18 03.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	12.26.18 03.03	
o-Terphenyl	84-15-1	86	%	70-135	12.26.18 03.03	

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JRU 66

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-013	Date Collected:	12.14.18 16.50	Sample Depth:	0 - .5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.20.18 02.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.18 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.20.18 02.50	
4-Bromofluorobenzene	460-00-4	88	%	70-130	12.20.18 02.50	

Certificate of Analytical Results 609033

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JRU 66

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-014	Date Collected:	12.14.18 17.00	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18.0**	4.99	mg/kg	12.20.18 04.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 03.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**40.8**	15.0	mg/kg	12.26.18 03.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	12.26.18 03.25	U	1
Total TPH	PHC635	**40.8**	15.0	mg/kg	12.26.18 03.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	12.26.18 03.25	
o-Terphenyl	84-15-1	82	%	70-135	12.26.18 03.25	

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JRU 66

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-014	Date Collected:	12.14.18 17.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.20.18 03.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.20.18 03.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	12.20.18 03.09	
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.20.18 03.09	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-015	Date Collected:	12.14.18 10.07	Sample Depth:	0 - 1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	12.19.18 16.30	Basis:	Wet Weight
Seq Number:	3073519				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1800**	24.8	mg/kg	12.20.18 04.31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	12.25.18 08.00	Basis:	Wet Weight
Seq Number:	3074144				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	12.26.18 03.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**3040**	15.0	mg/kg	12.26.18 03.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**553**	15.0	mg/kg	12.26.18 03.46		1
Total TPH	PHC635	**3590**	15.0	mg/kg	12.26.18 03.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	12.26.18 03.46	
o-Terphenyl	84-15-1	128	%	70-135	12.26.18 03.46	

Certificate of Analytical Results 609033

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.18.18 12.31
Lab Sample Id:	609033-015	Date Collected:	12.14.18 10.07	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	12.19.18 14.00	Basis:	Wet Weight
Seq Number:	3073528				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.20.18 03.28	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.20.18 03.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	12.20.18 03.28	
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.20.18 03.28	

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 609033

LT Environmental, Inc.

JRU 66

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073519 — Matrix: Solid — Date Prep: 12.19.18
MB Sample Id: 7668399-1-BLK — LCS Sample Id: 7668399-1-BKS — LCSD Sample Id: 7668399-1-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	312	125	273	109	90-110	13	20	mg/kg	12.20.18 01:28	H

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073519 — Matrix: Soil — Date Prep: 12.19.18
Parent Sample Id: 609032-005 — MS Sample Id: 609032-005 S — MSD Sample Id: 609032-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.855	249	268	108	273	110	90-110	2	20	mg/kg	12.20.18 01:46	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3073519 — Matrix: Soil — Date Prep: 12.19.18
Parent Sample Id: 609033-006 — MS Sample Id: 609033-006 S — MSD Sample Id: 609033-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.27	250	274	109	274	109	90-110	0	20	mg/kg	12.20.18 03:18	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3074144 — Matrix: Solid — Date Prep: 12.25.18
MB Sample Id: 7668812-1-BLK — LCS Sample Id: 7668812-1-BKS — LCSD Sample Id: 7668812-1-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	995	100	918	92	70-135	8	20	mg/kg	12.25.18 20:50	
Diesel Range Organics (DRO)	<8.13	1000	964	96	938	94	70-135	3	20	mg/kg	12.25.18 20:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		120		125		70-135	%	12.25.18 20:50
o-Terphenyl	109		107		113		70-135	%	12.25.18 20:50

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

QC Summary 609033

LT Environmental, Inc.

JRU 66

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3074144 Matrix: Soil Date Prep: 12.25.18
Parent Sample Id: 609033-001 MS Sample Id: 609033-001 S MSD Sample Id: 609033-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	806	81	829	83	70-135	3	20	mg/kg	12.25.18 21:55	
Diesel Range Organics (DRO)	9.92	999	826	82	831	82	70-135	1	20	mg/kg	12.25.18 21:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		103		70-135	%	12.25.18 21:55
o-Terphenyl	85		89		70-135	%	12.25.18 21:55

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3073531 Matrix: Solid Date Prep: 12.19.18
MB Sample Id: 7668412-1-BLK LCS Sample Id: 7668412-1-BKS LCSD Sample Id: 7668412-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0912	92	0.0956	96	70-130	5	35	mg/kg	12.19.18 14:16	
Toluene	<0.000454	0.0996	0.0867	87	0.0902	90	70-130	4	35	mg/kg	12.19.18 14:16	
Ethylbenzene	<0.000563	0.0996	0.0927	93	0.0966	97	70-130	4	35	mg/kg	12.19.18 14:16	
m,p-Xylenes	<0.00101	0.199	0.169	85	0.175	88	70-130	3	35	mg/kg	12.19.18 14:16	
o-Xylene	<0.000343	0.0996	0.0816	82	0.0854	85	70-130	5	35	mg/kg	12.19.18 14:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		102		70-130	%	12.19.18 14:16
4-Bromofluorobenzene	76		84		86		70-130	%	12.19.18 14:16

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3073528 Matrix: Solid Date Prep: 12.19.18
MB Sample Id: 7668427-1-BLK LCS Sample Id: 7668427-1-BKS LCSD Sample Id: 7668427-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0861	86	0.0806	81	70-130	7	35	mg/kg	12.20.18 00:00	
Toluene	<0.000455	0.0998	0.0802	80	0.0766	77	70-130	5	35	mg/kg	12.20.18 00:00	
Ethylbenzene	<0.000564	0.0998	0.0864	87	0.0830	83	70-130	4	35	mg/kg	12.20.18 00:00	
m,p-Xylenes	<0.00101	0.200	0.157	79	0.151	76	70-130	4	35	mg/kg	12.20.18 00:00	
o-Xylene	<0.000344	0.0998	0.0779	78	0.0754	75	70-130	3	35	mg/kg	12.20.18 00:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		103		101		70-130	%	12.20.18 00:00
4-Bromofluorobenzene	76		84		83		70-130	%	12.20.18 00:00

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

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

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

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

QC Summary 609033

LT Environmental, Inc.

JRU 66

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

Seq Number: 3073531 Matrix: Soil Date Prep: 12.19.18

Parent Sample Id: 609022-001 MS Sample Id: 609022-001 S MSD Sample Id: 609022-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.0624	63	0.0734	73	70-130	16	35	mg/kg	12.19.18 14:54	X
Toluene	<0.000455	0.0998	0.0518	52	0.0600	59	70-130	15	35	mg/kg	12.19.18 14:54	X
Ethylbenzene	<0.000564	0.0998	0.0456	46	0.0527	52	70-130	14	35	mg/kg	12.19.18 14:54	X
m,p-Xylenes	<0.00101	0.200	0.0809	40	0.0926	46	70-130	13	35	mg/kg	12.19.18 14:54	X
o-Xylene	<0.000344	0.0998	0.0407	41	0.0466	46	70-130	14	35	mg/kg	12.19.18 14:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	12.19.18 14:54
4-Bromofluorobenzene	91		91		70-130	%	12.19.18 14:54

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

Seq Number: 3073528 Matrix: Soil Date Prep: 12.19.18

Parent Sample Id: 609033-010 MS Sample Id: 609033-010 S MSD Sample Id: 609033-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0798	80	0.0775	77	70-130	3	35	mg/kg	12.20.18 00:38	
Toluene	<0.000456	0.100	0.0752	75	0.0734	73	70-130	2	35	mg/kg	12.20.18 00:38	
Ethylbenzene	<0.000565	0.100	0.0809	81	0.0789	78	70-130	3	35	mg/kg	12.20.18 00:38	
m,p-Xylenes	<0.00101	0.200	0.147	74	0.143	71	70-130	3	35	mg/kg	12.20.18 00:38	
o-Xylene	<0.000344	0.100	0.0723	72	0.0709	70	70-130	2	35	mg/kg	12.20.18 00:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	12.20.18 00:38
4-Bromofluorobenzene	86		84		70-130	%	12.20.18 00:38

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: 609033

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 2

Project Manager:	Adrian Baker	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:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	JRU 66	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.0 | 1.5	Thermometer ID	R8	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

ANALYSIS REQUEST

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS01	S	12/16/18	15:30	0.5'	1	X	X	X
FS02	S		15:35	0.5'	1	X	X	X
FS03	S		15:40	0.5'		X	X	X
FS04	S		15:45	0.5'		X	X	X
FS05	S		15:50	0.5'		X	X	X
FS06	S		15:55	1'		X	X	X
FS07	S		16:00	1'		X	X	X
FS08	S		16:10	1'		X	X	X
FS09	S		16:15	1'		X	X	X
FS10	S		16:25	1'		X	X	X

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			12/17/2018 7:50	2		12/17/18 09:35
3			12/17/18 15:30	4		12/18/18 12:15
5				6		

Revised Date 051418 Rev. 2018.1

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Chain of Custody

Work Order No: 609033

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 2 of 2

Project Manager:	Adrian Baker	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:	432.704.5178	Email:	abaker@ltenv.com

Work Order Comments

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

Project Name:	JRU 66	Turn Around	
Project Number:		Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Lynda Lawrenbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.6/1.5	Thermometer ID	R8
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1
Sample Custody Seals:	Yes No (N/A)	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
FS1	S	12/14/18	16:35	1'				
SW01	S		16:45	0-0.5'				
SW02	S		16:50	0-0.5'				
SW03	S		17:00	0-1'				
SW04	S		12:10	0-1'				

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			12/17/18 7:50	2		12/17/18 09:35
3			12/17/18 15:30	4		12/18/18 12:15
5				6		

Revised Date 051418 Rev. 2018.1

773998680930

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

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/18/2018 12:31:58 PM

Work Order #: 609033

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)?	1.5	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	Received container for sample 008 shattered and unsalvageable.
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 12/18/2018

Checklist reviewed by: Jessica Kramer Date: 12/18/2018

Jessica Kramer

Analytical Report 614287

for

LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 66

18-FEB-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

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

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

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

18-FEB-19

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

Reference: XENCO Report No(s): **614287**
JRU 66
Project Address: 2RP-3500

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 614287. 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. 614287 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 614287

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS08	S	02-11-19 11:55	1 ft	614287-001

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 66

Project ID:
Work Order Number(s): *614287*

Report Date: *18-FEB-19*
Date Received: *02/12/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3079389 BTEX by EPA 8021B

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

Certificate of Analysis Summary 614287

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

Project Id:
Contact: Adrian Baker
Project Location: 2RP-3500

Date Received in Lab: Tue Feb-12-19 12:30 pm
Report Date: 18-FEB-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	614287-001					
	Field Id:	FS08					
	Depth:	1- ft					
	Matrix:	SOIL					
	Sampled:	Feb-11-19 11:55					
BTEX by EPA 8021B	***Extracted:***	Feb-15-19 13:00					
	Analyzed:	Feb-18-19 01:50					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Feb-13-19 14:00					
	Analyzed:	Feb-13-19 16:49					
	Units/RL:	mg/kg	RL				
Chloride		10.3	5.00				
TPH by SW8015 Mod	***Extracted:***	Feb-13-19 11:00					
	Analyzed:	Feb-13-19 13:13					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 614287

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.12.19 12.30
Lab Sample Id:	614287-001	Date Collected:	02.11.19 11.55	Sample Depth:	1 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	02.13.19 14.00	Basis:	Wet Weight
Seq Number:	3079119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.3**	5.00	mg/kg	02.13.19 16.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	02.13.19 11.00	Basis:	Wet Weight
Seq Number:	3079094				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.13.19 13.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.13.19 13.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.13.19 13.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.13.19 13.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.13.19 13.13	
o-Terphenyl	84-15-1	98	%	70-135	02.13.19 13.13	

Certificate of Analytical Results 614287

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	02.12.19 12.30
Lab Sample Id:	614287-001	Date Collected:	02.11.19 11.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	02.15.19 13.00	Basis:	Wet Weight
Seq Number:	3079389				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.18.19 01.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.18.19 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	02.18.19 01.50	
4-Bromofluorobenzene	460-00-4	115	%	70-130	02.18.19 01.50	

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 614287

LT Environmental, Inc.

JRU 66

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3079119 — Matrix: Solid — Date Prep: 02.13.19
MB Sample Id: 7671710-1-BLK — LCS Sample Id: 7671710-1-BKS — LCSD Sample Id: 7671710-1-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	253	101	252	101	90-110	0	20	mg/kg	02.13.19 15:03	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3079119 — Matrix: Soil — Date Prep: 02.13.19
Parent Sample Id: 614283-009 — MS Sample Id: 614283-009 S — MSD Sample Id: 614283-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	63.0	250	333	108	333	108	90-110	0	20	mg/kg	02.13.19 15:32	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3079119 — Matrix: Soil — Date Prep: 02.13.19
Parent Sample Id: 614283-010 — MS Sample Id: 614283-010 S — MSD Sample Id: 614283-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	236	250	505	108	507	108	90-110	0	20	mg/kg	02.13.19 17:47	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3079094 — Matrix: Solid — Date Prep: 02.13.19
MB Sample Id: 7671746-1-BLK — LCS Sample Id: 7671746-1-BKS — LCSD Sample Id: 7671746-1-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	907	91	927	93	70-135	2	20	mg/kg	02.13.19 12:33	
Diesel Range Organics (DRO)	<8.13	1000	943	94	937	94	70-135	1	20	mg/kg	02.13.19 12:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		128		125		70-135	%	02.13.19 12:33
o-Terphenyl	99		126		125		70-135	%	02.13.19 12:33

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

Final 1.000

QC Summary 614287

LT Environmental, Inc.

JRU 66

Analytical Method: TPH by SW8015 Mod | Prep Method: TX1005P
Seq Number: 3079094 | Matrix: Soil | Date Prep: 02.13.19
Parent Sample Id: 614287-001 | MS Sample Id: 614287-001 S | MSD Sample Id: 614287-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.98	997	960	96	969	97	70-135	1	20	mg/kg	02.13.19 13:33	
Diesel Range Organics (DRO)	<8.10	997	995	100	1010	101	70-135	1	20	mg/kg	02.13.19 13:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		126		70-135	%	02.13.19 13:33
o-Terphenyl	120		114		70-135	%	02.13.19 13:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3079389 | Matrix: Solid | Date Prep: 02.15.19
MB Sample Id: 7671896-1-BLK | LCS Sample Id: 7671896-1-BKS | LCSD Sample Id: 7671896-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.121	121	0.126	126	70-130	4	35	mg/kg	02.15.19 21:12	
Toluene	<0.000457	0.100	0.106	106	0.110	110	70-130	4	35	mg/kg	02.15.19 21:12	
Ethylbenzene	<0.000566	0.100	0.0996	100	0.103	103	70-130	3	35	mg/kg	02.15.19 21:12	
m,p-Xylenes	<0.00102	0.200	0.201	101	0.209	105	70-130	4	35	mg/kg	02.15.19 21:12	
o-Xylene	<0.00200	0.100	0.0994	99	0.103	103	70-130	4	35	mg/kg	02.15.19 21:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		109		109		70-130	%	02.15.19 21:12
4-Bromofluorobenzene	93		103		103		70-130	%	02.15.19 21:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3079389 | Matrix: Soil | Date Prep: 02.15.19
Parent Sample Id: 614397-001 | MS Sample Id: 614397-001 S | MSD Sample Id: 614397-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0472	47	0.0495	50	70-130	5	35	mg/kg	02.15.19 21:50	X
Toluene	0.00129	0.0996	0.0295	28	0.0269	26	70-130	9	35	mg/kg	02.15.19 21:50	X
Ethylbenzene	<0.000563	0.0996	0.0206	21	0.0189	19	70-130	9	35	mg/kg	02.15.19 21:50	X
m,p-Xylenes	0.00161	0.199	0.0446	22	0.0393	19	70-130	13	35	mg/kg	02.15.19 21:50	X
o-Xylene	0.0123	0.0996	0.0125	0	0.0111	0	70-130	12	35	mg/kg	02.15.19 21:50	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		114		70-130	%	02.15.19 21:50
4-Bromofluorobenzene	110		104		70-130	%	02.15.19 21:50

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

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

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

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

Final 1.000

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www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote #

Xenco Job # 614287

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. Permian Office
Company Address: 3300 N "A" St. Building 1 Unit 103 Midland, TX 79705
Email: abyers@ltenv.com abaker@ltenv.com
Phone No: (575) 988-0754 (432) 704-5178
Project Contact: Adrian Baker
Samplers's Name: Anna Byers

Project Information

Project Name/Number: JRU 66
Project Location: 2RP-3500
Invoice To: XTO : Kyle Littrell
PO Number: 012918023

Analytical Information

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

Matrix Codes

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

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preservatives: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	FS08	1.0'	2/11	11:55	S	1								X	X	X	X	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

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

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

Data Deliverable Information

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

Notes:

FED-EX / UPS: Tracking #

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

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Anna Byers	2/11/19 @ 3:45	1	2	2/12/19	2 2/12/19
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: N

Cooler Temp. 0.3 | 0.2 | -0.1 | Thermo. Corr. Factor 1.000

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

7744 4346 9411

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02/12/2019 12:30:00 PM

Work Order #: 614287

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 02/12/2019

Checklist reviewed by: Jessica Kramer Date: 02/12/2019

Analytical Report 627197

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU 66

13-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)

13-JUN-19

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

Reference: XENCO Report No(s): **627197**
JRU 66
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) 627197. 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. 627197 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	06-06-19 09:40	1 ft	627197-001
PH01A	S	06-06-19 09:55	4 ft	627197-002
PH02	S	06-06-19 10:00	1 ft	627197-003
PH02A	S	06-06-19 10:15	4 ft	627197-004
PH03	S	06-06-19 10:25	1 ft	627197-005
PH03A	S	06-06-19 10:40	4 ft	627197-006

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 66

Project ID:
Work Order Number(s): *627197*

Report Date: *13-JUN-19*
Date Received: *06/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3091986 BTEX by EPA 8021B

Surrogate 1,4-Difluorobenzene, Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 627197-001 S. Parent Sample clean. Data accepted. Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 627197

LT Environmental, Inc., Arvada, CO

Project Name: JRU 66

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

Date Received in Lab: Tue Jun-11-19 11:20 am
Report Date: 13-JUN-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	627197-001		627197-002		627197-003		627197-004		627197-005		627197-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	1- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-06-19 09:40		Jun-06-19 09:55		Jun-06-19 10:00		Jun-06-19 10:15		Jun-06-19 10:25		Jun-06-19 10:40	
BTEX by EPA 8021B	*Extracted:*	Jun-11-19 12:30		Jun-11-19 12:30		Jun-11-19 12:30		Jun-11-19 12:30		Jun-11-19 12:30		Jun-11-19 12:30	
	Analyzed:	Jun-11-19 18:59		Jun-11-19 19:18		Jun-11-19 19:37		Jun-11-19 19:56		Jun-11-19 20:15		Jun-11-19 20:34	
	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	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00402	0.00402	<0.00402	0.00402	<0.00397	0.00397	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201	<0.00201	0.00201	<0.00198	0.00198	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	Jun-11-19 16:10		Jun-11-19 16:10		Jun-11-19 16:10		Jun-11-19 16:10		Jun-11-19 16:10		Jun-11-19 16:10	
	Analyzed:	Jun-11-19 17:50		Jun-11-19 18:12		Jun-11-19 18:19		Jun-11-19 18:26		Jun-11-19 18:34		Jun-11-19 18:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15.4	4.97	26.4	5.04	20.4	4.97	176	4.99	148	5.00	190	5.00
TPH by SW8015 Mod	*Extracted:*	Jun-11-19 12:00		Jun-11-19 12:00		Jun-11-19 12:00		Jun-11-19 12:00		Jun-11-19 12:00		Jun-11-19 12:00	
	Analyzed:	Jun-11-19 16:52		Jun-11-19 17:12		Jun-11-19 17:31		Jun-11-19 17:51		Jun-11-19 18:11		Jun-11-19 18:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-001	Date Collected:	06.06.19 09.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.4**	4.97	mg/kg	06.11.19 17.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.11.19 16.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.11.19 16.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.11.19 16.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.11.19 16.52	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.11.19 16.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.11.19 16.52	
o-Terphenyl	84-15-1	93	%	70-135	06.11.19 16.52	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-001	Date Collected:	06.06.19 09.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.11.19 18.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.11.19 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.11.19 18.59	
4-Bromofluorobenzene	460-00-4	121	%	70-130	06.11.19 18.59	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-002	Date Collected:	06.06.19 09.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.4**	5.04	mg/kg	06.11.19 18.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.11.19 17.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.11.19 17.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.11.19 17.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.11.19 17.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.11.19 17.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.11.19 17.12	
o-Terphenyl	84-15-1	99	%	70-135	06.11.19 17.12	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-002	Date Collected:	06.06.19 09.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.11.19 19.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.11.19 19.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.11.19 19.18	
4-Bromofluorobenzene	460-00-4	124	%	70-130	06.11.19 19.18	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-003	Date Collected:	06.06.19 10.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.4**	4.97	mg/kg	06.11.19 18.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.11.19 17.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.11.19 17.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.11.19 17.31	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.11.19 17.31	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.11.19 17.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.11.19 17.31	
o-Terphenyl	84-15-1	92	%	70-135	06.11.19 17.31	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-003	Date Collected:	06.06.19 10.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.11.19 19.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.11.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.11.19 19.37	
4-Bromofluorobenzene	460-00-4	123	%	70-130	06.11.19 19.37	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-004	Date Collected:	06.06.19 10.15	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**176**	4.99	mg/kg	06.11.19 18.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.11.19 17.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.11.19 17.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.11.19 17.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.11.19 17.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.11.19 17.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.11.19 17.51	
o-Terphenyl	84-15-1	97	%	70-135	06.11.19 17.51	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-004	Date Collected:	06.06.19 10.15	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.11.19 19.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.11.19 19.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.11.19 19.56	
1,4-Difluorobenzene	540-36-3	107	%	70-130	06.11.19 19.56	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-005	Date Collected:	06.06.19 10.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**148**	5.00	mg/kg	06.11.19 18.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.11.19 18.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.11.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.11.19 18.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.11.19 18.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.11.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.11.19 18.11	
o-Terphenyl	84-15-1	101	%	70-135	06.11.19 18.11	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-005	Date Collected:	06.06.19 10.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.11.19 20.15	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.11.19 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.11.19 20.15	
1,4-Difluorobenzene	540-36-3	107	%	70-130	06.11.19 20.15	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-006	Date Collected:	06.06.19 10.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	06.11.19 16.10	Basis:	Wet Weight
Seq Number:	3091948				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**190**	5.00	mg/kg	06.11.19 18.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.11.19 12.00	Basis:	Wet Weight
Seq Number:	3091979				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.11.19 18.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.11.19 18.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.11.19 18.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.11.19 18.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.11.19 18.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.11.19 18.31	
o-Terphenyl	84-15-1	93	%	70-135	06.11.19 18.31	

Certificate of Analytical Results 627197

LT Environmental, Inc., Arvada, CO

JRU 66

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	06.11.19 11.20
Lab Sample Id:	627197-006	Date Collected:	06.06.19 10.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	06.11.19 12.30	Basis:	Wet Weight
Seq Number:	3091986				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.11.19 20.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.11.19 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.11.19 20.34	
1,4-Difluorobenzene	540-36-3	106	%	70-130	06.11.19 20.34	

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 627197

LT Environmental, Inc.

JRU 66

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3091948 — Matrix: Solid — Date Prep: 06.11.19
MB Sample Id: 7679658-1-BLK — LCS Sample Id: 7679658-1-BKS — LCSD Sample Id: 7679658-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	230	92	230	92	90-110	0	20	mg/kg	06.11.19 17:03	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3091948 — Matrix: Soil — Date Prep: 06.11.19
Parent Sample Id: 627197-001 — MS Sample Id: 627197-001 S — MSD Sample Id: 627197-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.4	249	257	97	257	97	90-110	0	20	mg/kg	06.11.19 17:57	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3091948 — Matrix: Soil — Date Prep: 06.11.19
Parent Sample Id: 627199-002 — MS Sample Id: 627199-002 S — MSD Sample Id: 627199-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	626	250	860	94	858	93	90-110	0	20	mg/kg	06.11.19 19:39	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3091979 — Matrix: Solid — Date Prep: 06.11.19
MB Sample Id: 7679720-1-BLK — LCS Sample Id: 7679720-1-BKS — LCSD Sample Id: 7679720-1-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	1060	106	70-135	1	20	mg/kg	06.11.19 11:24	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1020	102	70-135	1	20	mg/kg	06.11.19 11:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		121		117		70-135	%	06.11.19 11:24
o-Terphenyl	88		99		97		70-135	%	06.11.19 11:24

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

Final 1.000

QC Summary 627197

LT Environmental, Inc.

JRU 66

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3091979 Matrix: Soil Date Prep: 06.11.19
Parent Sample Id: 627196-001 MS Sample Id: 627196-001 S MSD Sample Id: 627196-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1040	104	1060	106	70-135	2	20	mg/kg	06.11.19 12:22	
Diesel Range Organics (DRO)	<8.12	999	1010	101	1030	103	70-135	2	20	mg/kg	06.11.19 12:22	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		126		70-135	%	06.11.19 12:22
o-Terphenyl	117		119		70-135	%	06.11.19 12:22

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3091986 Matrix: Solid Date Prep: 06.11.19
MB Sample Id: 7679725-1-BLK LCS Sample Id: 7679725-1-BKS LCSD Sample Id: 7679725-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0921	92	0.102	102	70-130	10	35	mg/kg	06.11.19 17:07	
Toluene	<0.00199	0.0996	0.0911	91	0.0969	97	70-130	6	35	mg/kg	06.11.19 17:07	
Ethylbenzene	<0.00199	0.0996	0.0952	96	0.100	100	70-130	5	35	mg/kg	06.11.19 17:07	
m,p-Xylenes	<0.00398	0.199	0.190	95	0.199	100	70-130	5	35	mg/kg	06.11.19 17:07	
o-Xylene	<0.00199	0.0996	0.0946	95	0.0983	98	70-130	4	35	mg/kg	06.11.19 17:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		99		100		70-130	%	06.11.19 17:07
4-Bromofluorobenzene	97		97		97		70-130	%	06.11.19 17:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3091986 Matrix: Soil Date Prep: 06.11.19
Parent Sample Id: 627197-001 MS Sample Id: 627197-001 S MSD Sample Id: 627197-001 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	0.123	123	0.101	101	70-130	20	35	mg/kg	06.11.19 17:45	
Toluene	<0.00200	0.100	0.123	123	0.0963	96	70-130	24	35	mg/kg	06.11.19 17:45	
Ethylbenzene	<0.00200	0.100	0.127	127	0.0993	99	70-130	24	35	mg/kg	06.11.19 17:45	
m,p-Xylenes	<0.00401	0.200	0.234	117	0.197	99	70-130	17	35	mg/kg	06.11.19 17:45	
o-Xylene	<0.00200	0.100	0.115	115	0.0977	98	70-130	16	35	mg/kg	06.11.19 17:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	167	**	101		70-130	%	06.11.19 17:45
4-Bromofluorobenzene	169	**	99		70-130	%	06.11.19 17:45

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)

Work Order No: 427197

www.xenco.com Page 1 of 2

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

Work Order Comments

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

Project Name:	JRU 66	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-3500	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 6/11/19	

SAMPLE RECEIPT				
Temperature (°C):	0.4	Temp Blank:	Yes (No)	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID:		
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)
PH01	S	6/6/19	0940	1'	1	X	X	X
PH01A	S		0955	4'	1			
PH02	S		1000	1'	1			
PH02A	S		1015	4'	1			
PH03	S		1025	1'	1			
PH03A	S		1040	4'	1			

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		6/7/19 - 1640	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Work Order #: 627197

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

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

Brianna Teel

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

Jessica Kramer

Analytical Report 636953

for

LT Environmental, Inc.

Project Manager: Dan Moir

JRU66 (2RP-3500)

012918023

19-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)

19-SEP-19

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

Reference: XENCO Report No(s): **636953**
JRU66 (2RP-3500)
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) 636953. 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. 636953 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 636953

LT Environmental, Inc., Arvada, CO

JRU66 (2RP-3500)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW05	S	09-13-19 15:00	0 - 1 ft	636953-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU66 (2RP-3500)

Project ID: *012918023*
Work Order Number(s): *636953*

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

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101780 BTEX by EPA 8021B
Ethylbenzene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 636953-001
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Lab Sample ID 636953-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 636953-001.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 636953

LT Environmental, Inc., Arvada, CO

Project Name: JRU66 (2RP-3500)

Project Id: 012918023
Contact: Dan Moir
Project Location:

Date Received in Lab: Mon Sep-16-19 12:20 pm
Report Date: 19-SEP-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	636953-001					
	Field Id:	SW05					
	Depth:	0-1 ft					
	Matrix:	SOIL					
	Sampled:	Sep-13-19 15:00					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:45					
	Analyzed:	Sep-18-19 00:39					
	Units/RL:	mg/kg	RL				
Benzene		<0.00198	0.00198				
Toluene		<0.00198	0.00198				
Ethylbenzene		<0.00198	0.00198				
m,p-Xylenes		<0.00396	0.00396				
o-Xylene		<0.00198	0.00198				
Total Xylenes		<0.00198	0.00198				
Total BTEX		<0.00198	0.00198				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Sep-17-19 12:00					
	Analyzed:	Sep-17-19 18:24					
	Units/RL:	mg/kg	RL				
Chloride		133	4.97				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Sep-17-19 11:02					
	Analyzed:	Sep-17-19 22:47					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0				
Diesel Range Organics (DRO)		275	50.0				
Motor Oil Range Hydrocarbons (MRO)		65.3	50.0				
Total GRO-DRO		275	50.0				
Total TPH		340	50.0				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 636953

LT Environmental, Inc., Arvada, CO

JRU66 (2RP-3500)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636953-001	Date Collected:	09.13.19 15.00	Sample Depth:	0 - 1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	09.17.19 12.00	Basis:	Wet Weight
Seq Number:	3101734			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**133**	4.97	mg/kg	09.17.19 18.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	09.17.19 11.02	Basis:	Wet Weight
Seq Number:	3101746			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.17.19 22.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	**275**	50.0	mg/kg	09.17.19 22.47		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**65.3**	50.0	mg/kg	09.17.19 22.47		1
Total GRO-DRO	PHC628	**275**	50.0	mg/kg	09.17.19 22.47		1
Total TPH	PHC635	**340**	50.0	mg/kg	09.17.19 22.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.17.19 22.47	
o-Terphenyl	84-15-1	119	%	70-135	09.17.19 22.47	

Certificate of Analytical Results 636953

LT Environmental, Inc., Arvada, CO

JRU66 (2RP-3500)

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	09.16.19 12.20
Lab Sample Id:	636953-001	Date Collected:	09.13.19 15.00	Sample Depth:	0 - 1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	09.17.19 11.45	Basis:	Wet Weight
Seq Number:	3101780			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.18.19 00.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.18.19 00.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	09.18.19 00.39	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.18.19 00.39	

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 636953

LT Environmental, Inc.

JRU66 (2RP-3500)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101734 Matrix: Solid Date Prep: 09.17.19
MB Sample Id: 7686328-1-BLK LCS Sample Id: 7686328-1-BKS LCSD Sample Id: 7686328-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	258	103	266	106	90-110	3	20	mg/kg	09.17.19 15:23	

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

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

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

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

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3101746 Matrix: Solid Date Prep: 09.17.19
MB Sample Id: 7686310-1-BLK LCS Sample Id: 7686310-1-BKS LCSD Sample Id: 7686310-1-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	1020	102	1050	105	70-135	3	20	mg/kg	09.17.19 11:48	
Diesel Range Organics (DRO)	<15.0	1000	973	97	1020	102	70-135	5	20	mg/kg	09.17.19 11:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		118		123		70-135	%	09.17.19 11:48
o-Terphenyl	103		112		118		70-135	%	09.17.19 11:48

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 636953

LT Environmental, Inc.

JRU66 (2RP-3500)

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3101746 — Matrix: Soil — Date Prep: 09.17.19
Parent Sample Id: 636970-001 — MS Sample Id: 636970-001 S — MSD Sample Id: 636970-001 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)	40.0	999	1080	104	1020	98	70-135	6	20	mg/kg	09.17.19 12:52	
Diesel Range Organics (DRO)	1070	999	2020	95	2010	94	70-135	0	20	mg/kg	09.17.19 12:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		122		70-135	%	09.17.19 12:52
o-Terphenyl	102		102		70-135	%	09.17.19 12:52

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3101780 — Matrix: Solid — Date Prep: 09.17.19
MB Sample Id: 7686307-1-BLK — LCS Sample Id: 7686307-1-BKS — LCSD Sample Id: 7686307-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.101	101	0.0940	94	70-130	7	35	mg/kg	09.17.19 22:40	
Toluene	<0.00200	0.100	0.102	102	0.0941	94	70-130	8	35	mg/kg	09.17.19 22:40	
Ethylbenzene	<0.00200	0.100	0.109	109	0.100	100	70-130	9	35	mg/kg	09.17.19 22:40	
m,p-Xylenes	<0.00400	0.200	0.213	107	0.195	98	70-130	9	35	mg/kg	09.17.19 22:40	
o-Xylene	<0.00200	0.100	0.110	110	0.101	101	70-130	9	35	mg/kg	09.17.19 22:40	

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

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3101780 — Matrix: Soil — Date Prep: 09.17.19
Parent Sample Id: 636953-001 — MS Sample Id: 636953-001 S — MSD Sample Id: 636953-001 SD

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

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

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

Chain of Custody

HC 09-16

Work Order No: ~~6369953~~ 636953

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

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

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐

Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	SRU 66 (2RP-3500)	Turn Around	
Project Number:	02918023	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	3.8	Thermometer ID		
Received Intact:	(Yes) No		TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW05	S	9/13/19	1500	0-1'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

SSB 9/13/19

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
		09/16/19 @1220	2		9/16/19 12:40
			4		
			5		

Inter-Office Shipment

IOS Number **48043**

Date/Time: 09/16/19 14:12

Lab# From: **Carlsbad**

Lab# To: **Midland**

Created by: Martha Castro

Delivery Priority:

Air Bill No.:

Please send report to: Jessica Kramer

Address: 1089 N Canal Street

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636953-001	S	SW05	09/13/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	09/20/19	09/27/19	JKR	GRO-DRO PHCC10C28 PI	
636953-001	S	SW05	09/13/19 15:00	SW8021B	BTEX by EPA 8021B	09/20/19	09/27/19	JKR	BR4FBZ BZ BZME EBZ X	
636953-001	S	SW05	09/13/19 15:00	E300_CL	Chloride by EPA 300	09/20/19	03/11/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Carlos Castro

Date Relinquished: 09/16/2019

Received By:

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48043

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

Sent By: Martha Castro **Date Sent:** 09/16/2019 02:12 PM

Received By: **Date Received:**

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

_____

Checklist reviewed by:

Date: _____

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/16/2019 12:20:00 PM

Work Order #: 636953

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

Temperature Measuring device used : T NM 007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**No**	
#5 Custody Seals intact on sample bottles?	**No**	
#6*Custody Seals Signed and dated?	**No**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**Yes**	Subbed to Xenco Midland
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Martha Castro Date: 09/16/2019

Checklist reviewed by: Jessica Kramer Date: 09/18/2019

Jessica Kramer

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 244669

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 244669
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	8/17/2023