

April 23, 2019

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

**RE: Closure Request
Hasta La Vista 1 DI Federal Battery
Remediation Permit Number 2RP-5231
Eddy County, New Mexico**

Dear Mr. Bratcher

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing soil sampling and excavation activities at the Hasta La Vista 1 DI Federal Battery (Site) in Unit K, Section 33, Township 19 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil after a produced water release at the Site.

On January 23, 2019, a rupture in a four-inch poly water line released 61.77 barrels (bbls) of produced water onto the pasture area adjacent to the lease road. None of the released fluid was recovered. The water pumps were turned off at the battery until the line was repaired. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on February 5, 2019, and was assigned Remediation Permit (RP) Number 2RP-5231 (Attachment 1).

BACKGROUND

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is CP 00722 POD3 located approximately 2,057 feet north-northeast of the Site. The water well has a depth to groundwater of 140 feet and a total depth of 220 feet bgs. Ground surface elevation at the water well location is 3,457 feet, which is 4 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is a ditch located approximately 7,990 feet southeast of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low karst area. Based on these criteria, the following NMOCD Table 1 closure criteria



were applied: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); 1,000 mg/kg gasoline range organics (GRO) and diesel range organics (DRO); 2,500 mg/kg total petroleum hydrocarbons (TPH); and 20,000 mg/kg chloride. A closure criteria of 600 mg/kg chloride was applied to the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation. Additionally, excavation and soil sampling activities were completed after a March 21, 2019, meeting between XTO and the U.S. Bureau of Land Management (BLM) during which BLM indicated a preferred chloride closure criteria of 600 mg/kg for the top 4 feet of all impacted areas on and off pad.

PRELIMINARY SOIL SAMPLING

On January 29, 2019, LTE personnel inspected the Site to evaluate the release extent. Surface staining was observed in the pasture release area. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is depicted on Figure 2. LTE personnel collected three preliminary soil samples (SS01 through SS03) within the pasture release area from a depth of 0.5 feet bgs to assess the lateral extent of soil impacts. The soil samples were screened for volatile aromatic hydrocarbons and chlorides using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were shipped to Xenco Laboratories (Xenco) in Midland, Texas, at 4 degrees Celsius (°C) under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) by EPA Method 8015M/D, and chloride by EPA Method 300.0. The soil sample locations are presented on Figure 2.

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in preliminary soil samples SS01 through SS03. Laboratory analytical results indicated that chloride concentrations exceeded 600 mg/kg in all three preliminary soil samples. Based on the laboratory analytical results, potholing was scheduled to delineate the lateral and vertical extent of impacted soil prior to excavation activities. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2.

DELINEATION ACTIVITIES

During April 2019, LTE personnel returned to the Site to oversee potholing activities to delineate the lateral and vertical extent of impacted soil. Potholes BH01 through BH07 were advanced in and around the release area via hand auger to depths ranging from 4 feet to 9 feet bgs. Soil was field screened in the potholes using a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected for laboratory analysis from each pothole BH01 through BH07 from depths ranging from 1 foot to 9 feet bgs. The delineation soil samples were collected,





handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The soil sample locations and depths are depicted on Figure 3 and soil sample logs are included in Attachment 3.

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria in all delineation soil samples collected from potholes BH01 through BH07. Additionally, laboratory analytical indicated that chloride concentrations were below 600 mg/kg in all delineation soil samples collected at or above 4 feet bgs. Based on the laboratory analytical results, the lateral and vertical extent of impacted soil was defined. Laboratory analytical results are presented on Figure 3 and summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

EXCAVATION ACTIVITIES

On April 15, 2019, LTE personnel were at the Site to oversee excavation of impacted soil as indicated by field screening, laboratory analytical results, and the documented release area. To delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil samples using a PID and Hach® chloride QuanTab® test strips. Impacted soil was excavated to a depth of 4.5 feet bgs. 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 5 aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation from depths of 0 to 4 feet bgs. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from a depth of 4.5 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. The excavation soil sample locations are presented on Figure 4.

The excavation measured approximately 776 square feet in area. The horizontal extent of the excavation is presented on Figure 4. A total of approximately 110 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Environmental Solutions landfill in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that chloride concentrations exceeded 600 mg/kg in preliminary soil samples SS01 through SS03, collected at 0.5 feet bgs. Impacted soil was excavated to the extent possible. Laboratory analytical results for excavation sidewall samples SW01 through SW03 and excavation floor samples FS01 and FS02 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the NMOCD Table 1 closure criteria and chloride concentrations were below 600 mg/kg in samples collected at or above 4 feet bgs.





Laboratory analytical for excavation sidewall sample SW04, collected from a depth of 0 to 4 feet bgs, indicated that chloride concentrations exceeded 600 mg/kg.

Further excavation of impacted soil beyond excavation sidewall sample SW04 was limited by the presence of active pipelines. XTO safety policy restricts soil disturbing activities to a 2 foot radius of any pipelines. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of the pipelines. This policy was enforced where impacted soil was identified within 2 feet of an active pipeline. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

A total of 110 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place for compliance with the XTO safety policy regarding earth moving activities within 2 feet of active pipelines. Laboratory analytical results for excavation soil sample SW04, collected from the final excavation extent, indicated that soil with chloride concentrations exceeding 600 mg/kg was left in place within 2 feet of an active pipeline. An estimated 30 cubic yards of impacted soil remain in place, assuming a maximum 9 foot depth based on pothole soil samples BH01A through BH07A collected from depths of 4 feet to 9 feet bgs that were compliant with the NMOCD Table 1 closure criteria.

XTO requests to backfill the existing excavation and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. No saturated soil remains in place. The impacted soil remaining in place in the southern excavation sidewall is delineated vertically and laterally by delineation soil samples collected from potholes BH01 through BH07, and excavation soil samples SW01, SW02, SW03, FS01, and FS02.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release number 2RP-5231. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1. A photographic log of the Site is included as Attachment 4.

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





Sincerely,
LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads "Ashley L. Ager".

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Robert Hamlet, NMOCD
Jim Amos, BLM
Crystal Weaver, BLM

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 Reports
Attachment 1 Initial/Final NMOCD Forms C-141 (2RP-5231)
Attachment 2 Laboratory Analytical Reports
Attachment 3 Soil Sample Logs
Attachment 4 Photographic Log

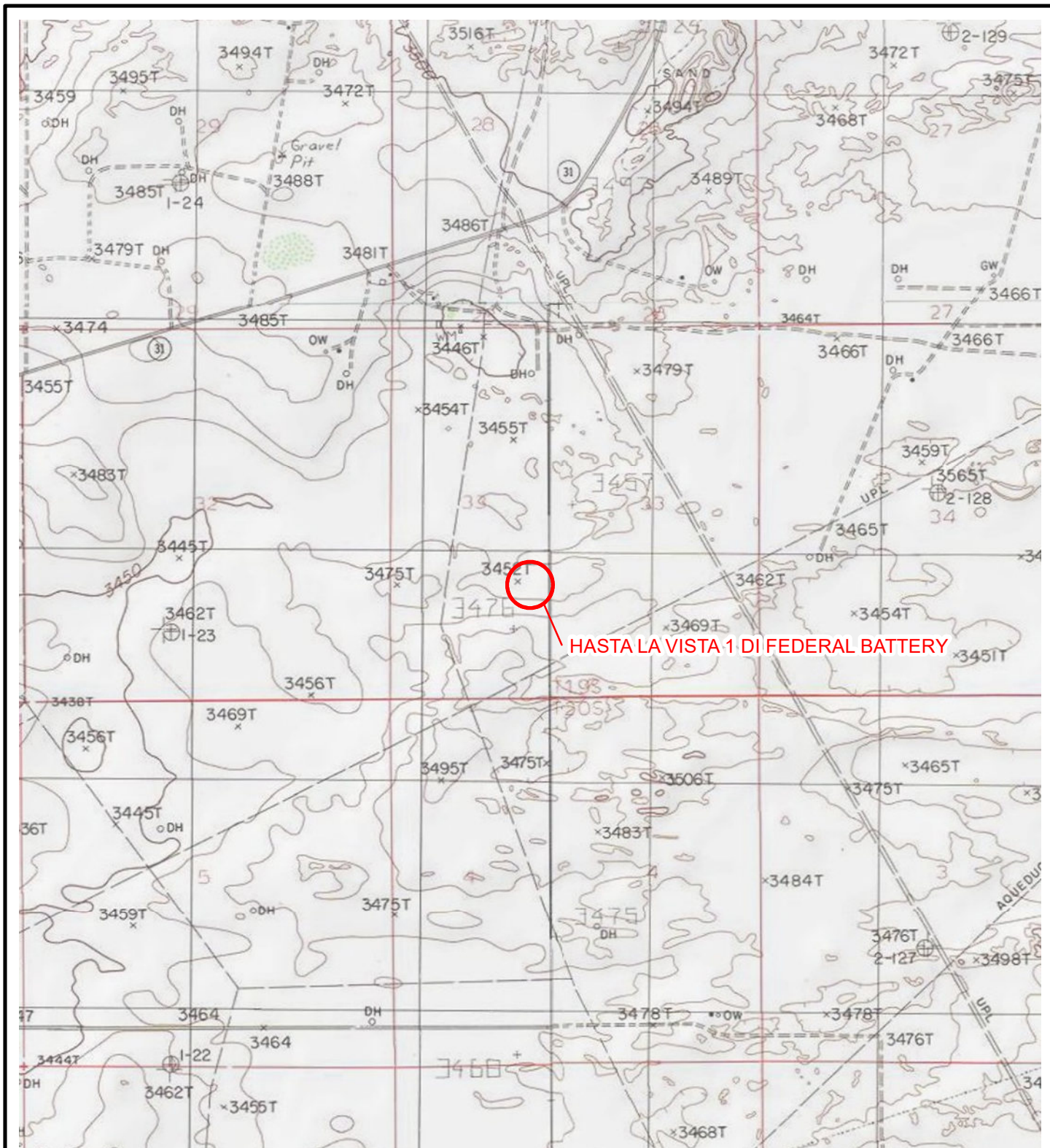
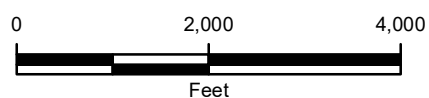


IMAGE COURTESY OF ESRI/USGS

LEGEND

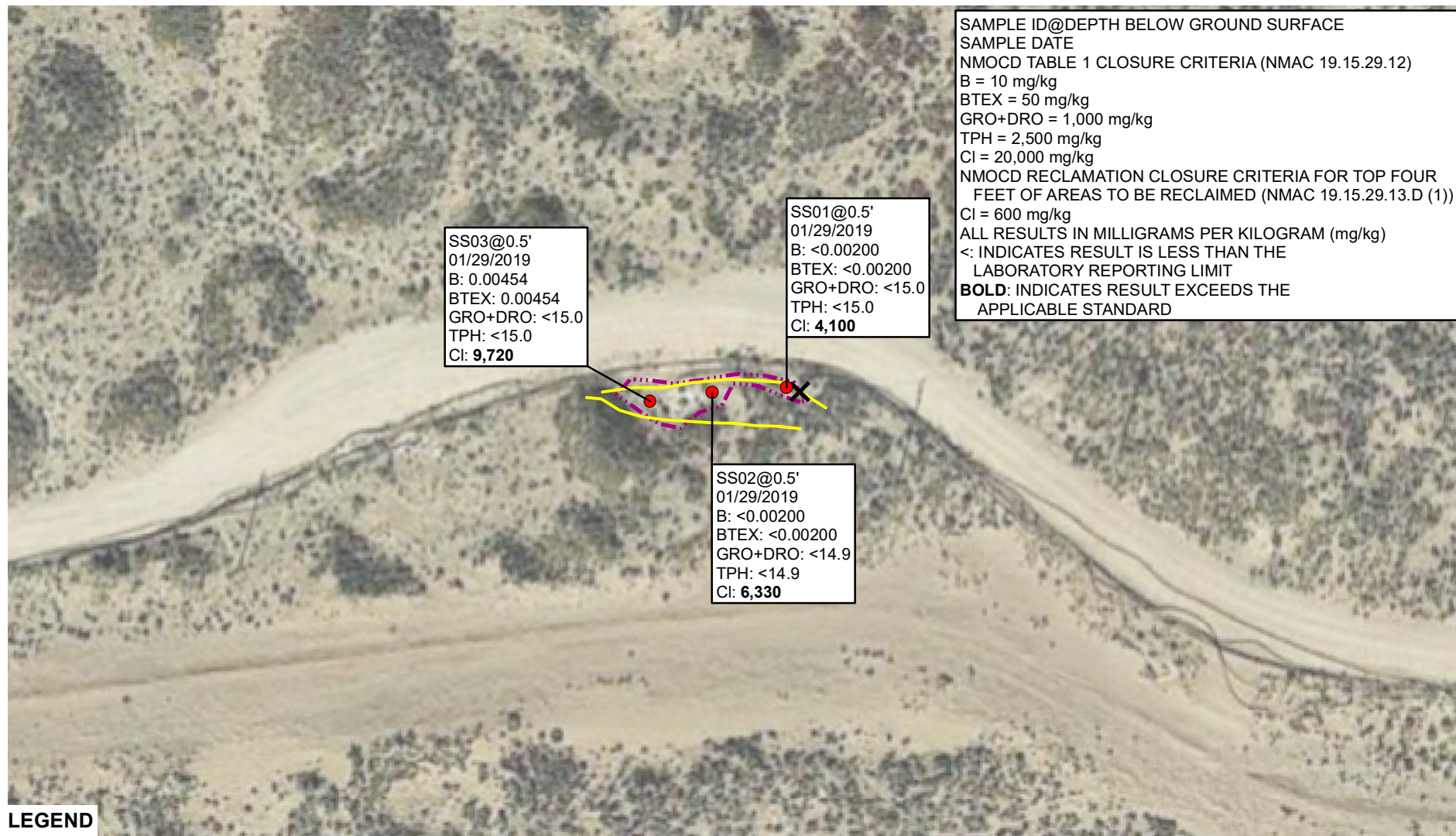
 SITE LOCATION



NOTE: REMEDIATION PERMIT
NUMBER 2RP-5231

FIGURE 1
SITE LOCATION MAP
HASTA LA VISTA 1 DI FEDERAL BATTERY
UNIT K SEC 33 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





SAMPLE ID@DEPTH BELOW GROUND SURFACE
 SAMPLE DATE
 NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
 B = 10 mg/kg
 BTEX = 50 mg/kg
 GRO+DRO = 1,000 mg/kg
 TPH = 2,500 mg/kg
 Cl = 20,000 mg/kg
 NMOCD RECLAMATION CLOSURE CRITERIA FOR TOP FOUR
 FEET OF AREAS TO BE RECLAIMED (NMAC 19.15.29.13.D (1))
 Cl = 600 mg/kg
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT
BOLD: INDICATES RESULT EXCEEDS THE
 APPLICABLE STANDARD

LEGEND

- × RELEASE LOCATION
- PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS
- PIPELINE
- RELEASE EXTENT

B: BENZENE
 BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
 GRO – GASOLINE RANGE ORGANICS
 DRO – DIESEL RANGE ORGANICS
 TPH – TOTAL PETROLEUM HYDROCARBONS
 Cl - CHLORIDE
 NMAC – NEW MEXICO ADMINISTRATIVE CODE
 NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
 NOTE: REMEDIATION PERMIT NUMBERS 2RP-5231

IMAGE COURTESY OF GOOGLE EARTH 2017

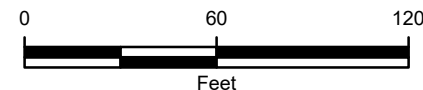
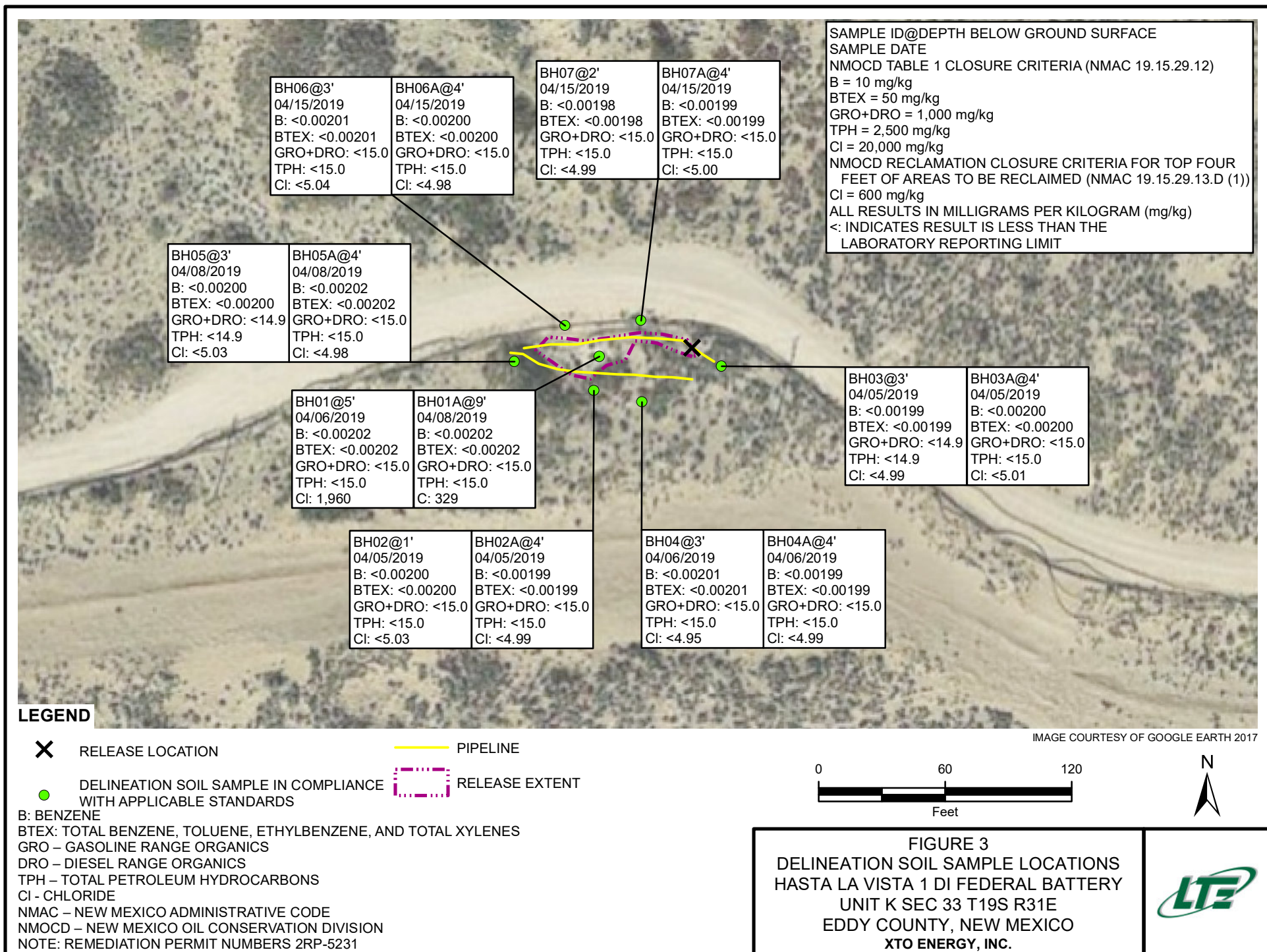


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 HASTA LA VISTA 1 DI FEDERAL BATTERY
 UNIT K SEC 33 T19S R31E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





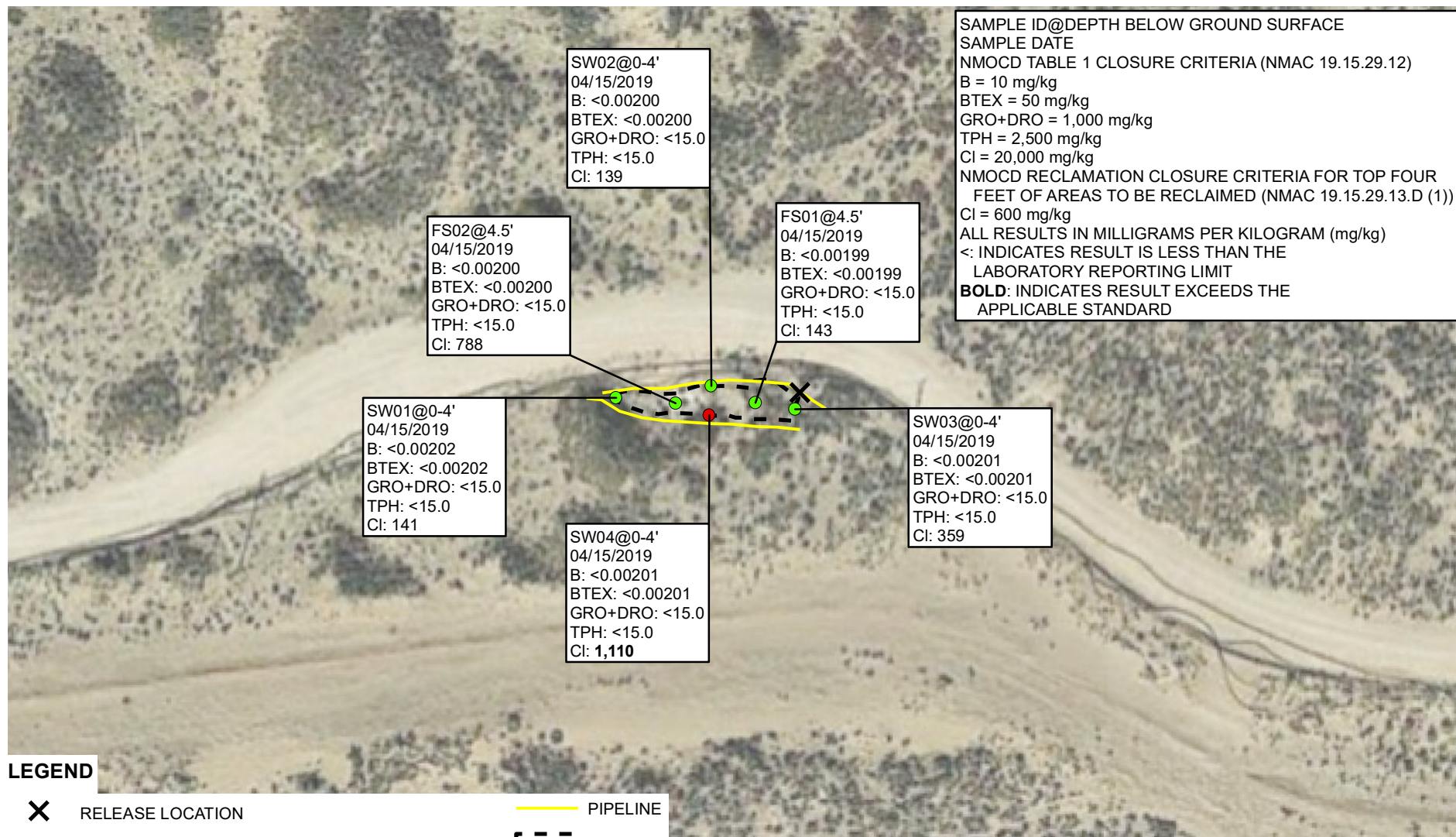


FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
HASTA LA VISTA 1 DI FEDERAL BATTERY
UNIT K SEC 33 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



**TABLE 1
SOIL ANALYTICAL RESULTS**

**HASTA LA VISTA 1 DI FEDERAL BATTERY
REMEDATION PERMIT NUMBER 2RP-5231
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	01/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	4,110*
SS02	0.5	01/29/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	6,330*
SS03	0.5	01/29/2019	0.00454	<0.00201	<0.00201	<0.00201	0.00454	<15.0	<15.0	<15.0	<15.0	<15.0	9,720*
BH02	1	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03*
BH02A	4	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
BH03	3	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.99*
BH03A	4	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.01*
BH01	5	04/06/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	1,960
BH04	3	04/06/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95*
BH04A	4	04/06/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
BH01A	9	04/08/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	329
BH05	3	04/08/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	<5.03*
BH05A	4	04/08/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98*
BH06	3	04/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04*
BH06A	4	04/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98*
BH07	2	04/15/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
BH07A	4	04/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00*
FS01	4.5	04/15/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	143
FS02	4.5	04/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	788
SW01	0 - 4	04/15/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	141*
SW02	0 - 4	04/15/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	139*
SW03	0 - 4	04/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	359*
SW04	0 - 4	04/15/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	1,110*



TABLE 1 (Continued)
SOIL ANALYTICAL RESULTS

HASTA LA VISTA 1 DI FEDERAL BATTERY
REMEDIATION PERMIT NUMBER 2RP-5231
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	C6-C10 GRO (mg/kg)	C10-C28 DRO (mg/kg)	C28-C40 ORO (mg/kg)	GRO and DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

DRO - diesel range organics

GRO - gasoline range organics

ORO - oil range organics

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold - indicates result exceeds the applicable regulatory standard

* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018 NMAC - New Mexico Administrative Code



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	NAB1904255873
District RP	2 2RP-5231
Facility ID	
Application ID	pAB1904254733

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # (assigned by OCD) NAB1904255873
Contact mailing address 322 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.61404 Longitude -103.87612
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Hasta La Vista 1 DI Federal Battery	Site Type poly line
Date Release Discovered 1/23/2019	API# (if applicable) 30-015-42533 Hasta La Vista 1 DI Fed Com 1H

Unit Letter	Section	Township	Range	County
K	33	19S	31E	Eddy

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

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)		
☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 61.77	Volume Recovered (bbls) 0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		
The poly line was ruptured by a third party as they ran over the line with equipment. The damaged 4" water line released fluids to the pasture. The water pumps were turned off at the battery until the line was repaired. An environmental contractor has been retained to assist with remediation efforts.		

State of New Mexico
Oil Conservation Division

Incident ID	NAB1904255873
District RP	2 2RP-5231
Facility ID	
Application ID	pAB1904254733

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice provided by Amy Ruth to Mike Bratcher, Rob Hamlet, and Jim Griswold (NMOCD), Shelly Tucker and Jim Amos (BIM) on 1/24/2019 by email	

Initial Response

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

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

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

N/A

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

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

Printed Name: Kyle Littrell

Title: SH&E Coordinator

Signature: 

Date: 02/05/2019

email: Kyle.Littrell@xtoenergy.com

Telephone: 432-221-7331

OCD Only

Received by: 

Date: 2/11/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5231
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 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5231
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Coordinator
Signature:  Date: 4/23/2019
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-5231
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

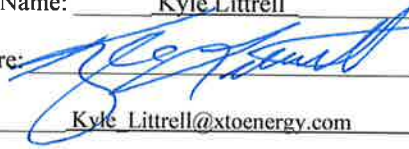
- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature:  Date: 4/23/2019

email: Kyle.Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5231
Facility ID	
Application ID	

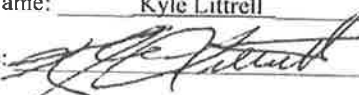
Closure

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 OCD 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 Coordinator
Signature:  Date: 4/23/2019
email: Kyle.Littrell@xtocenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____
Printed Name: _____ Title: _____

Analytical Report 613080

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Husta La Vista 1 DI Fed Com 1H

07-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)

Xenco-Lakeland: Florida (E84098)



07-FEB-19

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

Reference: XENCO Report No(s): **613080**
Husta La Vista 1 DI Fed Com 1H
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) 613080. 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. 613080 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
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 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	01-29-19 14:20	0.5 ft	613080-001
SS02	S	01-29-19 14:25	0.5 ft	613080-002
SS03	S	01-29-19 14:30	0.5 ft	613080-003



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Husta La Vista 1 DI Fed Com 1H*

Project ID:
Work Order Number(s): 613080

Report Date: 07-FEB-19
Date Received: 01/31/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3078311 BTEX by EPA 8021B

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



Certificate of Analysis Summary 613080

LT Environmental, Inc., Arvada, CO

Project Name: Husta La Vista 1 DI Fed Com 1H



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Thu Jan-31-19 02:02 pm

Report Date: 07-FEB-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	613080-001	613080-002	613080-003			
	Field Id:	SS01	SS02	SS03			
	Depth:	0.5- ft	0.5- ft	0.5- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Jan-29-19 14:20	Jan-29-19 14:25	Jan-29-19 14:30			
BTEX by EPA 8021B	Extracted:	Feb-06-19 08:30	Feb-06-19 08:30	Feb-06-19 08:30			
	Analyzed:	Feb-06-19 20:34	Feb-06-19 20:53	Feb-06-19 21:12			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200	0.00454 0.00201			
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	0.00454 0.00201			
Inorganic Anions by EPA 300	Extracted:	Feb-04-19 16:00	Feb-04-19 16:00	Feb-04-19 16:00			
	Analyzed:	Feb-05-19 01:28	Feb-05-19 01:34	Feb-05-19 01:40			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		4110 25.0	6330 50.0	9720 49.9			
TPH by SW8015 Mod	Extracted:	Feb-05-19 10:00	Feb-05-19 10:00	Feb-05-19 10:00			
	Analyzed:	Feb-05-19 18:37	Feb-05-19 18:57	Feb-05-19 19:17			
	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			
Motor Oil Range Hydrocarbons (MRO)		<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			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: **SS01**
Lab Sample Id: 613080-001

Matrix: Soil
Date Collected: 01.29.19 14.20

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3078028

Date Prep: 02.04.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4110	25.0	mg/kg	02.05.19 01.28		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3078222

Date Prep: 02.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 18.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 18.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 18.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 18.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	02.05.19 18.37	
o-Terphenyl	84-15-1	88	%	70-135	02.05.19 18.37	



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: **SS01**
Lab Sample Id: 613080-001

Matrix: Soil
Date Collected: 01.29.19 14.20

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3078311

Date Prep: 02.06.19 08.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.06.19 20.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.06.19 20.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	02.06.19 20.34		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.06.19 20.34		



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: SS02
Lab Sample Id: 613080-002

Matrix: Soil
Date Collected: 01.29.19 14.25

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3078028

Date Prep: 02.04.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6330	50.0	mg/kg	02.05.19 01.34		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3078222

Date Prep: 02.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.05.19 18.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	02.05.19 18.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	02.05.19 18.57	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	02.05.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	02.05.19 18.57	
o-Terphenyl	84-15-1	93	%	70-135	02.05.19 18.57	



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: SS02
Lab Sample Id: 613080-002

Matrix: Soil
Date Collected: 01.29.19 14.25

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3078311

Date Prep: 02.06.19 08.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.06.19 20.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.06.19 20.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.06.19 20.53		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.06.19 20.53		



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: SS03
Lab Sample Id: 613080-003

Matrix: Soil
Date Collected: 01.29.19 14.30

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3078028

Date Prep: 02.04.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9720	49.9	mg/kg	02.05.19 01.40		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3078222

Date Prep: 02.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.05.19 19.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.05.19 19.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.05.19 19.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.05.19 19.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	02.05.19 19.17	
o-Terphenyl	84-15-1	91	%	70-135	02.05.19 19.17	



Certificate of Analytical Results 613080



LT Environmental, Inc., Arvada, CO

Husta La Vista 1 DI Fed Com 1H

Sample Id: SS03
Lab Sample Id: 613080-003

Matrix: Soil
Date Collected: 01.29.19 14.30

Date Received: 01.31.19 14.02
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 02.06.19 08.30

Basis: Wet Weight

Seq Number: 3078311

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.00454	0.00201	mg/kg	02.06.19 21.12		1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.06.19 21.12	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.06.19 21.12	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.06.19 21.12	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.06.19 21.12	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.06.19 21.12	U	1
Total BTEX		0.00454	0.00201	mg/kg	02.06.19 21.12		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	02.06.19 21.12		
1,4-Difluorobenzene	540-36-3	112	%	70-130	02.06.19 21.12		

- 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 613080

LT Environmental, Inc.
Husta La Vista 1 DI Fed Com 1H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3078028

MB Sample Id: 7671039-1-BLK

Matrix: Solid

LCS Sample Id: 7671039-1-BKS

Prep Method: E300P

Date Prep: 02.04.19

LCSD Sample Id: 7671039-1-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	261	104	267	107	90-110	2	20	mg/kg	02.04.19 22:41	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3078028

Parent Sample Id: 612994-001

Matrix: Soil

MS Sample Id: 612994-001 S

Prep Method: E300P

Date Prep: 02.04.19

MSD Sample Id: 612994-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	254	102	268	107	90-110	5	20	mg/kg	02.04.19 23:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3078028

Parent Sample Id: 613079-005

Matrix: Soil

MS Sample Id: 613079-005 S

Prep Method: E300P

Date Prep: 02.04.19

MSD Sample Id: 613079-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.857	250	248	99	253	101	90-110	2	20	mg/kg	02.05.19 00:29	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3078222

MB Sample Id: 7671160-1-BLK

Matrix: Solid

LCS Sample Id: 7671160-1-BKS

Prep Method: TX1005P

Date Prep: 02.05.19

LCSD Sample Id: 7671160-1-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	851	85	878	88	70-135	3	20	mg/kg	02.05.19 12:29	
Diesel Range Organics (DRO)	<8.13	1000	953	95	978	98	70-135	3	20	mg/kg	02.05.19 12:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		123		127		70-135	%	02.05.19 12:29
o-Terphenyl	93		119		122		70-135	%	02.05.19 12:29

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 613080

LT Environmental, Inc. Husta La Vista 1 DI Fed Com 1H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3078222

Parent Sample Id: 613229-021

Matrix: Soil

MS Sample Id: 613229-021 S

Prep Method: TX1005P

Date Prep: 02.05.19

MSD Sample Id: 613229-021 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	927	93	923	92	70-135	0	20	mg/kg	02.05.19 13:54	
Diesel Range Organics (DRO)	<8.12	999	1070	107	1060	106	70-135	1	20	mg/kg	02.05.19 13:54	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		130		70-135	%	02.05.19 13:54
o-Terphenyl	124		127		70-135	%	02.05.19 13:54

Analytical Method: BTEX by EPA 8021B

Seq Number: 3078311

MB Sample Id: 7671229-1-BLK

Matrix: Solid

LCS Sample Id: 7671229-1-BKS

Prep Method: SW5030B

Date Prep: 02.06.19

LCSD Sample Id: 7671229-1-BSO

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.118	117	0.120	120	70-130	2	35	mg/kg	02.06.19 09:35	
Toluene	<0.000458	0.101	0.106	105	0.106	106	70-130	0	35	mg/kg	02.06.19 09:35	
Ethylbenzene	<0.000568	0.101	0.104	103	0.101	101	70-130	3	35	mg/kg	02.06.19 09:35	
m,p-Xylenes	<0.00102	0.201	0.208	103	0.201	101	70-130	3	35	mg/kg	02.06.19 09:35	
o-Xylene	<0.000346	0.101	0.103	102	0.0997	100	70-130	3	35	mg/kg	02.06.19 09:35	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		106		70-130	%	02.06.19 09:35
4-Bromofluorobenzene	94		106		104		70-130	%	02.06.19 09:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3078311

Parent Sample Id: 613114-001

Matrix: Soil

MS Sample Id: 613114-001 S

Prep Method: SW5030B

Date Prep: 02.06.19

MSD Sample Id: 613114-001 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	0.0771	77	0.0721	71	70-130	7	35	mg/kg	02.06.19 10:13	
Toluene	<0.000455	0.0998	0.0660	66	0.0554	55	70-130	17	35	mg/kg	02.06.19 10:13	X
Ethylbenzene	<0.000564	0.0998	0.0561	56	0.0418	41	70-130	29	35	mg/kg	02.06.19 10:13	X
m,p-Xylenes	<0.00101	0.200	0.113	57	0.0833	41	70-130	30	35	mg/kg	02.06.19 10:13	X
o-Xylene	0.000450	0.0998	0.0565	56	0.0421	41	70-130	29	35	mg/kg	02.06.19 10:13	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		110		70-130	%	02.06.19 10:13
4-Bromofluorobenzene	111		109		70-130	%	02.06.19 10:13

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

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

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

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)555-3443 Lubbock, TX (806)794-1296
Phoenix AZ/(480)-355-0900 Atlanta GA/(770)-446-8900 Tampa FL/(813)-382-7550
Phoenix NM/(575)-382-7550

Page 1 of 1
www.yanbo.com

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:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	bbelill@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: ☐

[illegible]

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		1/30/19 1300			01/30/19 1335
3 		1/31/19 1402			
5			6		

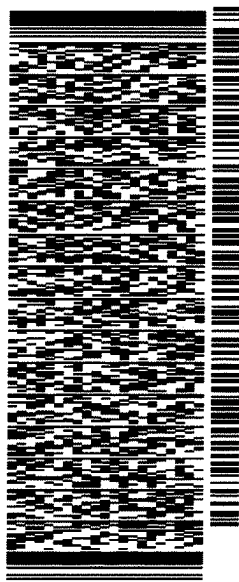
ORIGIN ID:CAOA (575) 887-6245
XENCO
PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 30JAN19
ACTWGT: 10.00 LB
CAD: 101813706INET4100
DIMS: 16x15x11 IN
BILL RECIPIENT

TO HOLD FOR XENCO
FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S

MIDLAND TX 79711
(806) 794-1296
REF:
INV:
PO:
DEPT:

565J20E3D/23AD



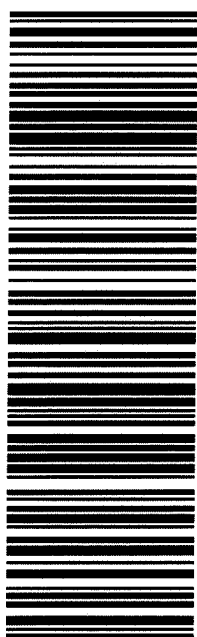
J191813018701ur

TRK# 7743 5373 5121
0201

THU - 31 JAN HOLD
STANDARD OVERNIGHT

41 MAFA

HLD
MAFA
TX-US LBB



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 Service Guide. 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: 01/31/2019 02:02:00 PM

Work Order #: 613080

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)?	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

Brianna Teel

Date: 01/31/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 02/01/2019

Analytical Report 620612

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Hasta La Vista DI Federal

15-APR-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)

Xenco-Lakeland: Florida (E84098)



15-APR-19

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

Reference: XENCO Report No(s): **620612**
Hasta La Vista DI Federal
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 620612. 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. 620612 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout

Midland Laboratory Director

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	04-06-19 13:55	5 ft	620612-001
BH01A	S	04-08-19 16:15	9 ft	620612-002
BH02	S	04-05-19 14:30	1 ft	620612-003
BH02A	S	04-05-19 14:55	4 ft	620612-004
BH03	S	04-05-19 12:30	3 ft	620612-005
BH03A	S	04-05-19 12:35	4 ft	620612-006
BH04	S	04-06-19 13:25	3 ft	620612-007
BH04A	S	04-06-19 13:28	4 ft	620612-008
BH05	S	04-08-19 16:55	3 ft	620612-009
BH05A	S	04-08-19 17:00	4 ft	620612-010



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hasta La Vista DI Federal*

Project ID: ---
Work Order Number(s): 620612

Report Date: 15-APR-19
Date Received: 04/10/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085309 Inorganic Anions by EPA 300

Lab Sample ID 620613-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 620612-001, -002, -003, -004, -005, -006, -007, -008. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3085496 BTEX by EPA 8021B

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

Batch: LBA-3085519 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected. Samples affected are: 620612-008.

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



Certificate of Analysis Summary 620612

LT Environmental, Inc., Arvada, CO

Project Name: Hasta La Vista DI Federal



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

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 15-APR-19
Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	620612-001	620612-002	620612-003	620612-004	620612-005	620612-006
	<i>Field Id:</i>	BH01	BH01A	BH02	BH02A	BH03	BH03A
	<i>Depth:</i>	5- ft	9- ft	1- ft	4- ft	3- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-06-19 13:55	Apr-08-19 16:15	Apr-05-19 14:30	Apr-05-19 14:55	Apr-05-19 12:30	Apr-05-19 12:35
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-11-19 16:00	Apr-11-19 10:00	Apr-11-19 16:00	Apr-11-19 16:00	Apr-11-19 16:00	Apr-11-19 16:00
	<i>Analyzed:</i>	Apr-12-19 10:52	Apr-11-19 22:50	Apr-12-19 11:11	Apr-12-19 11:30	Apr-12-19 11:49	Apr-12-19 12:08
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00403 0.00403	<0.00403 0.00403	<0.00400 0.00400	<0.00398 0.00398	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Apr-10-19 15:15	Apr-10-19 15:15	Apr-10-19 15:15	Apr-10-19 15:15	Apr-10-19 15:15	Apr-10-19 15:15
	<i>Analyzed:</i>	Apr-11-19 12:40	Apr-11-19 12:47	Apr-10-19 15:54	Apr-11-19 12:54	Apr-11-19 13:00	Apr-11-19 13:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1960 49.8	329 5.00	<5.03 5.03	<4.99 4.99	<4.99 4.99	<5.01 5.01
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00
	<i>Analyzed:</i>	Apr-10-19 20:51	Apr-10-19 21:48	Apr-10-19 22:08	Apr-10-19 22:27	Apr-10-19 22:45	Apr-11-19 23:04
	<i>Units/RL:</i>	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
Total GRO-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

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analysis Summary 620612

LT Environmental, Inc., Arvada, CO

Project Name: Hasta La Vista DI Federal



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

Date Received in Lab: Wed Apr-10-19 11:54 am
Report Date: 15-APR-19
Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	620612-007	620612-008	620612-009	620612-010		
	<i>Field Id:</i>	BH04	BH04A	BH05	BH05A		
	<i>Depth:</i>	3- ft	4- ft	3- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Apr-06-19 13:25	Apr-06-19 13:28	Apr-08-19 16:55	Apr-08-19 17:00		
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-11-19 16:00	Apr-11-19 16:00	Apr-11-19 16:00	Apr-11-19 16:00		
	<i>Analyzed:</i>	Apr-12-19 12:27	Apr-12-19 12:46	Apr-12-19 13:05	Apr-12-19 13:24		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403		
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202		
Chloride by EPA 300	<i>Extracted:</i>	Apr-10-19 15:15	Apr-10-19 15:15	Apr-10-19 16:00	Apr-10-19 16:00		
	<i>Analyzed:</i>	Apr-11-19 13:14	Apr-11-19 13:21	Apr-12-19 14:25	Apr-12-19 14:46		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<4.95 4.95	<4.99 4.99	<5.03 5.03	<4.98 4.98		
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00	Apr-10-19 15:00		
	<i>Analyzed:</i>	Apr-11-19 23:24	Apr-11-19 23:43	Apr-11-19 00:02	Apr-11-19 00:21		
	<i>Units/RL:</i>	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		
Diesel Range Organics (DRO)		<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	<14.9 14.9	<15.0 15.0		
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH01**
Lab Sample Id: 620612-001

Matrix: Soil
Date Collected: 04.06.19 13.55

Date Received: 04.10.19 11.54
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1960	49.8	mg/kg	04.11.19 12.40		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 20.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 20.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 20.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 20.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 20.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.10.19 20.51	
o-Terphenyl	84-15-1	101	%	70-135	04.10.19 20.51	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH01**
Lab Sample Id: 620612-001

Matrix: Soil
Date Collected: 04.06.19 13.55

Date Received: 04.10.19 11.54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.11.19 16.00

Basis: Wet Weight

Seq Number: 3085519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.12.19 10.52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.12.19 10.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	128	%	70-130	04.12.19 10.52		
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.12.19 10.52		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH01A**
Lab Sample Id: 620612-002

Matrix: Soil
Date Collected: 04.08.19 16.15

Date Received: 04.10.19 11.54
Sample Depth: 9 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	329	5.00	mg/kg	04.11.19 12.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 21.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 21.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 21.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 21.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 21.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.10.19 21.48	
o-Terphenyl	84-15-1	99	%	70-135	04.10.19 21.48	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH01A**
Lab Sample Id: 620612-002

Matrix: Soil
Date Collected: 04.08.19 16.15

Date Received: 04.10.19 11.54
Sample Depth: 9 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.11.19 10.00

Basis: Wet Weight

Seq Number: 3085496

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.11.19 22.50	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.11.19 22.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.11.19 22.50		
4-Bromofluorobenzene	460-00-4	128	%	70-130	04.11.19 22.50		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH02**
Lab Sample Id: 620612-003

Matrix: Soil
Date Collected: 04.05.19 14.30

Date Received: 04.10.19 11.54
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	04.10.19 15.54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 22.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 22.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 22.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 22.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 22.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.10.19 22.08	
o-Terphenyl	84-15-1	97	%	70-135	04.10.19 22.08	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH02**
Lab Sample Id: 620612-003

Matrix: Soil
Date Collected: 04.05.19 14.30

Date Received: 04.10.19 11.54
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.11.19 16.00

Basis: Wet Weight

Seq Number: 3085519

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.12.19 11.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.19 11.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.12.19 11.11		
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.12.19 11.11		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH02A**
Lab Sample Id: 620612-004

Matrix: Soil
Date Collected: 04.05.19 14.55

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.11.19 12.54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 22.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 22.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 22.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 22.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 22.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.10.19 22.27	
o-Terphenyl	84-15-1	96	%	70-135	04.10.19 22.27	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH02A**
Lab Sample Id: 620612-004

Matrix: Soil
Date Collected: 04.05.19 14.55

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Prep Method: SW5030B

% Moisture:

Date Prep: 04.11.19 16.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.12.19 11.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.12.19 11.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.12.19 11.30		
4-Bromofluorobenzene	460-00-4	117	%	70-130	04.12.19 11.30		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH03**
Lab Sample Id: 620612-005

Matrix: Soil
Date Collected: 04.05.19 12.30

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.11.19 13.00	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.10.19 22.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.10.19 22.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.10.19 22.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.10.19 22.45	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.10.19 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.10.19 22.45	
o-Terphenyl	84-15-1	95	%	70-135	04.10.19 22.45	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH03**
Lab Sample Id: 620612-005

Matrix: Soil
Date Collected: 04.05.19 12.30

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Prep Method: SW5030B

% Moisture:

Date Prep: 04.11.19 16.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.12.19 11.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.12.19 11.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.12.19 11.49		
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.12.19 11.49		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH03A**
Lab Sample Id: 620612-006

Matrix: Soil
Date Collected: 04.05.19 12.35

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	04.11.19 13.07	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 23.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 23.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 23.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 23.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 23.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.11.19 23.04	
o-Terphenyl	84-15-1	96	%	70-135	04.11.19 23.04	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH03A**
Lab Sample Id: 620612-006

Matrix: Soil
Date Collected: 04.05.19 12.35

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Date Prep: 04.11.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.12.19 12.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.19 12.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.12.19 12.08		
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.12.19 12.08		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH04**
Lab Sample Id: 620612-007

Matrix: Soil
Date Collected: 04.06.19 13.25

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	04.11.19 13.14	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 23.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 23.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 23.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 23.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 23.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 23.24	
o-Terphenyl	84-15-1	96	%	70-135	04.11.19 23.24	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH04**
Lab Sample Id: 620612-007

Matrix: Soil
Date Collected: 04.06.19 13.25

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Prep Method: SW5030B

% Moisture:

Date Prep: 04.11.19 16.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.12.19 12.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.12.19 12.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	121	%	70-130	04.12.19 12.27		
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.12.19 12.27		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH04A**
Lab Sample Id: 620612-008

Matrix: Soil
Date Collected: 04.06.19 13.28

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085309

Date Prep: 04.10.19 15.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.11.19 13.21	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 23.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 23.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 23.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.11.19 23.43	
o-Terphenyl	84-15-1	95	%	70-135	04.11.19 23.43	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH04A**
Lab Sample Id: 620612-008

Matrix: Soil
Date Collected: 04.06.19 13.28

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Date Prep: 04.11.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.12.19 12.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.12.19 12.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	171	%	70-130	04.12.19 12.46	**	
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.12.19 12.46		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH05**
Lab Sample Id: 620612-009

Matrix: Soil
Date Collected: 04.08.19 16.55

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085609

Date Prep: 04.10.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	04.12.19 14.25	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.11.19 00.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.11.19 00.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.11.19 00.02	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.11.19 00.02	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.11.19 00.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.11.19 00.02	
o-Terphenyl	84-15-1	98	%	70-135	04.11.19 00.02	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH05**
Lab Sample Id: 620612-009

Matrix: Soil
Date Collected: 04.08.19 16.55

Date Received: 04.10.19 11.54
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Date Prep: 04.11.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.12.19 13.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.12.19 13.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	04.12.19 13.05		
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.12.19 13.05		



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH05A**
Lab Sample Id: 620612-010

Matrix: Soil
Date Collected: 04.08.19 17.00

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3085609

Date Prep: 04.10.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	04.12.19 14.46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085312

Date Prep: 04.10.19 15.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.11.19 00.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.11.19 00.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.11.19 00.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.11.19 00.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.11.19 00.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.11.19 00.21	
o-Terphenyl	84-15-1	97	%	70-135	04.11.19 00.21	



Certificate of Analytical Results 620612



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH05A**
Lab Sample Id: 620612-010

Matrix: Soil
Date Collected: 04.08.19 17.00

Date Received: 04.10.19 11.54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085519

Date Prep: 04.11.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.12.19 13.24	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.12.19 13.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.12.19 13.24		
1,4-Difluorobenzene	540-36-3	104	%	70-130	04.12.19 13.24		

- 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 620612

LT Environmental, Inc. Hasta La Vista DI Federal

Analytical Method: Chloride by EPA 300

Seq Number: 3085309

MB Sample Id: 7675469-1-BLK

Matrix: Solid

LCS Sample Id: 7675469-1-BKS

Prep Method: E300P

Date Prep: 04.10.19

LCSD Sample Id: 7675469-1-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	259	104	242	97	90-110	7	20	mg/kg	04.10.19 15:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3085609

MB Sample Id: 7675481-1-BLK

Matrix: Solid

LCS Sample Id: 7675481-1-BKS

Prep Method: E300P

Date Prep: 04.10.19

LCSD Sample Id: 7675481-1-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	263	105	253	101	90-110	4	20	mg/kg	04.12.19 12:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3085309

Parent Sample Id: 620612-003

Matrix: Soil

MS Sample Id: 620612-003 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620612-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.53	252	239	93	219	86	90-110	9	20	mg/kg	04.10.19 16:01	X

Analytical Method: Chloride by EPA 300

Seq Number: 3085309

Parent Sample Id: 620613-008

Matrix: Soil

MS Sample Id: 620613-008 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620613-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.7	250	282	99	279	98	90-110	1	20	mg/kg	04.11.19 11:59	

Analytical Method: Chloride by EPA 300

Seq Number: 3085609

Parent Sample Id: 620316-005

Matrix: Soil

MS Sample Id: 620316-005 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620316-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.5	248	321	101	323	102	90-110	1	20	mg/kg	04.12.19 16:08	

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 620612

LT Environmental, Inc. Hasta La Vista DI Federal

Analytical Method: Chloride by EPA 300

Seq Number: 3085609

Parent Sample Id: 620612-009

Matrix: Soil

MS Sample Id: 620612-009 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620612-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.06	252	261	103	273	108	90-110	4	20	mg/kg	04.12.19 14:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085312

MB Sample Id: 7675489-1-BLK

Matrix: Solid

LCS Sample Id: 7675489-1-BKS

Prep Method: TX1005P

Date Prep: 04.10.19

LCSD Sample Id: 7675489-1-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	1060	106	1030	103	70-135	3	20	mg/kg	04.10.19 20:14	
Diesel Range Organics (DRO)	<8.13	1000	1160	116	1140	114	70-135	2	20	mg/kg	04.10.19 20:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		128		128		70-135	%	04.10.19 20:14
o-Terphenyl	111		120		126		70-135	%	04.10.19 20:14

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085312

Parent Sample Id: 620612-001

Matrix: Soil

MS Sample Id: 620612-001 S

Prep Method: TX1005P

Date Prep: 04.10.19

MSD Sample Id: 620612-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	958	96	955	96	70-135	0	20	mg/kg	04.10.19 21:10	
Diesel Range Organics (DRO)	<8.13	1000	1050	105	1040	104	70-135	1	20	mg/kg	04.10.19 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		124		70-135	%	04.10.19 21:10
o-Terphenyl	109		113		70-135	%	04.10.19 21:10

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

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

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 620612

LT Environmental, Inc.
Hasta La Vista DI Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085496

MB Sample Id: 7675649-1-BLK

Matrix: Solid

LCS Sample Id: 7675649-1-BKS

Prep Method: SW5030B

Date Prep: 04.11.19

LCSD Sample Id: 7675649-1-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	0.101	101	0.0995	100	70-130	1	35	mg/kg	04.11.19 13:04	
Toluene	<0.00199	0.0996	0.0980	98	0.0955	96	70-130	3	35	mg/kg	04.11.19 13:04	
Ethylbenzene	<0.00199	0.0996	0.102	102	0.0987	99	70-130	3	35	mg/kg	04.11.19 13:04	
m,p-Xylenes	<0.00398	0.199	0.204	103	0.198	99	70-130	3	35	mg/kg	04.11.19 13:04	
o-Xylene	<0.00199	0.0996	0.103	103	0.100	100	70-130	3	35	mg/kg	04.11.19 13:04	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	106		99		99		70-130			%	04.11.19 13:04	
4-Bromofluorobenzene	101		104		105		70-130			%	04.11.19 13:04	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085519

MB Sample Id: 7675657-1-BLK

Matrix: Solid

LCS Sample Id: 7675657-1-BKS

Prep Method: SW5030B

Date Prep: 04.11.19

LCSD Sample Id: 7675657-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0958	96	0.0968	97	70-130	1	35	mg/kg	04.12.19 09:00	
Toluene	<0.00201	0.100	0.0916	92	0.0926	93	70-130	1	35	mg/kg	04.12.19 09:00	
Ethylbenzene	<0.00201	0.100	0.0940	94	0.0939	94	70-130	0	35	mg/kg	04.12.19 09:00	
m,p-Xylenes	<0.00102	0.201	0.186	93	0.186	93	70-130	0	35	mg/kg	04.12.19 09:00	
o-Xylene	<0.00201	0.100	0.0954	95	0.0957	96	70-130	0	35	mg/kg	04.12.19 09:00	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	105		100		99		70-130			%	04.12.19 09:00	
4-Bromofluorobenzene	104		100		103		70-130			%	04.12.19 09:00	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085496

Parent Sample Id: 620064-001

Matrix: Soil

MS Sample Id: 620064-001 S

Prep Method: SW5030B

Date Prep: 04.11.19

MSD Sample Id: 620064-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0628	62	0.0640	63	70-130	2	35	mg/kg	04.11.19 14:45	X
Toluene	<0.00202	0.101	0.0810	80	0.0833	82	70-130	3	35	mg/kg	04.11.19 14:45	
Ethylbenzene	<0.00202	0.101	0.0836	83	0.0891	88	70-130	6	35	mg/kg	04.11.19 14:45	
m,p-Xylenes	0.00119	0.202	0.137	67	0.181	89	70-130	28	35	mg/kg	04.11.19 14:45	X
o-Xylene	<0.00202	0.101	0.0663	66	0.0899	89	70-130	30	35	mg/kg	04.11.19 14:45	X
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits		Units	Analysis Date		
1,4-Difluorobenzene			91		94		70-130		%	04.11.19 14:45		
4-Bromofluorobenzene			126		122		70-130		%	04.11.19 14:45		

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

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

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 620612

LT Environmental, Inc.
Hasta La Vista DI Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085519

Parent Sample Id: 620612-001

Matrix: Soil

MS Sample Id: 620612-001 S

Prep Method: SW5030B

Date Prep: 04.11.19

MSD Sample Id: 620612-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0953	94	0.0944	94	70-130	1	35	mg/kg	04.12.19 09:38	
Toluene	<0.00202	0.101	0.0936	93	0.0908	91	70-130	3	35	mg/kg	04.12.19 09:38	
Ethylbenzene	<0.00202	0.101	0.0959	95	0.0926	93	70-130	4	35	mg/kg	04.12.19 09:38	
m,p-Xylenes	0.00189	0.202	0.183	90	0.177	88	70-130	3	35	mg/kg	04.12.19 09:38	
o-Xylene	<0.00202	0.101	0.0973	96	0.0925	93	70-130	5	35	mg/kg	04.12.19 09:38	

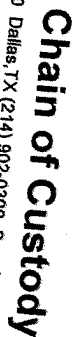
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	04.12.19 09:38
4-Bromofluorobenzene	111		106		70-130	%	04.12.19 09:38

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



2/20/20

Agents of Custody
Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915)565-3443 Lubbock, TX (806) 792-7550
Phoenix, AZ (602) 575-3922

www.xencon.com Page ____ of ____

Work Order Comments

Program: UST/PST ☐ RP ☐ Rowfields ☐ C ☐ Pertund ☐

State of Project:

Reporting Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐

Deliverables: EDD ☐ AD ☐

ANALYSIS REQUEST								☐ ADAP-1	☐ Other:
								Work Order Notes	
(5)									
(21)									
(600.0)									

[illegible][illegible]

Relinquished by: (Signature) _____

1631 / 2AC 4 / 7450

Acquainted by: (Signature)

Received by: (Signature) Robert M. M.

11/5/1	Done by	
	Valer / me	

		1458	2	0.	0	Signature)
--	--	------	---	----	---	------------

		(signature)
--	--	-------------

24-00-13

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

Revised m...	1	2	3
--------------	---	---	---



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 04/10/2019 11:54:00 AM

Work Order #: 620612

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)?	Yes 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:

Brianna Teel

Brianna Teel

Date: 04/10/2019

Checklist reviewed by:

Kalei Stout

Kalei Stout

Date: 04/10/2019

Analytical Report 621238

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Hasta La Vista DI Federal

18-APR-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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

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

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



18-APR-19

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

Reference: XENCO Report No(s): **621238**
Hasta La Vista DI Federal
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 621238. 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. 621238 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout

Midland Laboratory Director

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH06	S	04-15-19 08:45	3 ft	621238-001
BH06A	S	04-15-19 08:50	4 ft	621238-002
BH07	S	04-15-19 09:55	2 ft	621238-003
BH07A	S	04-15-19 10:05	4 ft	621238-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hasta La Vista DI Federal*

Project ID: ---
Work Order Number(s): 621238

Report Date: 18-APR-19
Date Received: 04/16/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085867 BTEX by EPA 8021B

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

Batch: LBA-3085873 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 621238-001.



Certificate of Analysis Summary 621238

LT Environmental, Inc., Arvada, CO

Project Name: Hasta La Vista DI Federal



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

Date Received in Lab: Tue Apr-16-19 12:31 pm
Report Date: 18-APR-19
Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	621238-001	621238-002	621238-003	621238-004		
	<i>Field Id:</i>	BH06	BH06A	BH07	BH07A		
	<i>Depth:</i>	3- ft	4- ft	2- ft	4- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Apr-15-19 08:45	Apr-15-19 08:50	Apr-15-19 09:55	Apr-15-19 10:05		
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45		
	<i>Analyzed:</i>	Apr-16-19 18:32	Apr-16-19 18:51	Apr-16-19 19:10	Apr-16-19 18:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398		
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00		
	<i>Analyzed:</i>	Apr-17-19 08:22	Apr-17-19 08:28	Apr-17-19 08:48	Apr-17-19 08:54		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		<5.04 5.04	<4.98 4.98	<4.99 4.99	<5.00 5.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00		
	<i>Analyzed:</i>	Apr-16-19 23:52	Apr-17-19 00:12	Apr-17-19 00:31	Apr-17-19 00:50		
	<i>Units/RL:</i>	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		
Diesel Range Organics (DRO)		<15.0 15.0	<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	<15.0 15.0	<15.0 15.0		
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH06**
Lab Sample Id: 621238-001

Matrix: Soil
Date Collected: 04.15.19 08.45

Date Received: 04.16.19 12.31
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	04.17.19 08.22	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 23.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 23.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 23.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 23.52	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 23.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.16.19 23.52	
o-Terphenyl	84-15-1	104	%	70-135	04.16.19 23.52	



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH06**
Lab Sample Id: 621238-001

Matrix: Soil
Date Collected: 04.15.19 08.45

Date Received: 04.16.19 12.31
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085873

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.16.19 18.32	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.16.19 18.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.16.19 18.32		
4-Bromofluorobenzene	460-00-4	140	%	70-130	04.16.19 18.32	**	



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH06A**
Lab Sample Id: 621238-002

Matrix: Soil
Date Collected: 04.15.19 08.50

Date Received: 04.16.19 12.31
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	04.17.19 08.28	U	1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 00.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 00.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 00.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 00.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 00.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 00.12	
o-Terphenyl	84-15-1	102	%	70-135	04.17.19 00.12	



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH06A**
Lab Sample Id: 621238-002

Matrix: Soil
Date Collected: 04.15.19 08.50

Date Received: 04.16.19 12.31
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085873

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.16.19 18.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.19 18.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.16.19 18.51		
4-Bromofluorobenzene	460-00-4	110	%	70-130	04.16.19 18.51		



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH07**
Lab Sample Id: 621238-003

Matrix: Soil
Date Collected: 04.15.19 09.55

Date Received: 04.16.19 12.31
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	04.17.19 08.48	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 00.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 00.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 00.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 00.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 00.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 00.31	
o-Terphenyl	84-15-1	103	%	70-135	04.17.19 00.31	



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH07**
Lab Sample Id: 621238-003

Matrix: Soil
Date Collected: 04.15.19 09:55

Date Received: 04.16.19 12:31
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085873

Date Prep: 04.16.19 12:45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.16.19 19:10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.16.19 19:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.16.19 19:10		
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.16.19 19:10		



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH07A**
Lab Sample Id: 621238-004

Matrix: Soil
Date Collected: 04.15.19 10.05

Date Received: 04.16.19 12.31
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	04.17.19 08.54	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 00.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 00.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 00.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 00.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 00.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 00.50	
o-Terphenyl	84-15-1	102	%	70-135	04.17.19 00.50	



Certificate of Analytical Results 621238



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **BH07A**
Lab Sample Id: 621238-004

Matrix: Soil
Date Collected: 04.15.19 10.05

Date Received: 04.16.19 12.31
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.16.19 18.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.16.19 18.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.16.19 18.09		
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.16.19 18.09		

- 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 621238

LT Environmental, Inc.
Hasta La Vista DI Federal

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

MB Sample Id: 7675970-1-BLK

Matrix: Solid

LCS Sample Id: 7675970-1-BKS

Prep Method: E300P

Date Prep: 04.16.19

LCSD Sample Id: 7675970-1-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	254	102	251	100	90-110	1	20	mg/kg	04.16.19 16:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

Parent Sample Id: 621114-005

Matrix: Soil

MS Sample Id: 621114-005 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621114-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	108	248	348	97	323	87	90-110	7	20	mg/kg	04.17.19 08:09	X

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

Parent Sample Id: 621239-001

Matrix: Soil

MS Sample Id: 621239-001 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621239-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	250	395	102	390	100	90-110	1	20	mg/kg	04.16.19 16:31	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085983

MB Sample Id: 7675909-1-BLK

Matrix: Solid

LCS Sample Id: 7675909-1-BKS

Prep Method: TX1005P

Date Prep: 04.16.19

LCSD Sample Id: 7675909-1-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	1060	106	993	99	70-135	7	20	mg/kg	04.16.19 20:57	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1010	101	70-135	8	20	mg/kg	04.16.19 20:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		129		128		70-135	%	04.16.19 20:57
o-Terphenyl	115		118		125		70-135	%	04.16.19 20:57

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

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

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 621238

LT Environmental, Inc.

Hasta La Vista DI Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085983

Parent Sample Id: 621114-001

Matrix: Soil

MS Sample Id: 621114-001 S

Prep Method: TX1005P

Date Prep: 04.16.19

MSD Sample Id: 621114-001 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)	12.7	999	1000	99	1000	99	70-135	0	20	mg/kg	04.16.19 21:56	
Diesel Range Organics (DRO)	13.9	999	1050	104	1060	105	70-135	1	20	mg/kg	04.16.19 21:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	04.16.19 21:56
o-Terphenyl	123		113		70-135	%	04.16.19 21:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085867

MB Sample Id: 7675871-1-BLK

Matrix: Solid

LCS Sample Id: 7675871-1-BKS

Prep Method: SW5030B

Date Prep: 04.16.19

LCSD Sample Id: 7675871-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0990	98	0.0994	100	70-130	0	35	mg/kg	04.16.19 08:57	
Toluene	<0.000458	0.101	0.0996	99	0.100	100	70-130	0	35	mg/kg	04.16.19 08:57	
Ethylbenzene	<0.000568	0.101	0.0914	90	0.0918	92	70-130	0	35	mg/kg	04.16.19 08:57	
m,p-Xylenes	<0.00102	0.201	0.182	91	0.182	91	70-130	0	35	mg/kg	04.16.19 08:57	
o-Xylene	<0.000346	0.101	0.0919	91	0.0921	92	70-130	0	35	mg/kg	04.16.19 08:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		100		101		70-130	%	04.16.19 08:57
4-Bromofluorobenzene	82		95		96		70-130	%	04.16.19 08:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085873

MB Sample Id: 7675873-1-BLK

Matrix: Solid

LCS Sample Id: 7675873-1-BKS

Prep Method: SW5030B

Date Prep: 04.16.19

LCSD Sample Id: 7675873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000381	0.0990	0.0974	98	0.0993	99	70-130	2	35	mg/kg	04.16.19 09:03	
Toluene	0.000579	0.0990	0.0995	101	0.102	102	70-130	2	35	mg/kg	04.16.19 09:03	
Ethylbenzene	<0.000559	0.0990	0.105	106	0.108	108	70-130	3	35	mg/kg	04.16.19 09:03	
m,p-Xylenes	<0.00100	0.198	0.213	108	0.217	109	70-130	2	35	mg/kg	04.16.19 09:03	
o-Xylene	0.000439	0.0990	0.107	108	0.109	109	70-130	2	35	mg/kg	04.16.19 09:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		95		96		70-130	%	04.16.19 09:03
4-Bromofluorobenzene	109		106		108		70-130	%	04.16.19 09:03

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

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

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 621238

LT Environmental, Inc. Hasta La Vista DI Federal

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085867

Parent Sample Id: 621040-001

Matrix: Soil

MS Sample Id: 621040-001 S

Prep Method: SW5030B

Date Prep: 04.16.19

MSD Sample Id: 621040-001 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	0.0994	0.0887	89	0.0929	93	70-130	5	35	mg/kg	04.16.19 09:35	
Toluene	<0.000453	0.0994	0.0894	90	0.0929	93	70-130	4	35	mg/kg	04.16.19 09:35	
Ethylbenzene	<0.000561	0.0994	0.0827	83	0.0842	84	70-130	2	35	mg/kg	04.16.19 09:35	
m,p-Xylenes	<0.00101	0.199	0.163	82	0.167	84	70-130	2	35	mg/kg	04.16.19 09:35	
o-Xylene	<0.000342	0.0994	0.0831	84	0.0850	85	70-130	2	35	mg/kg	04.16.19 09:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	04.16.19 09:35
4-Bromofluorobenzene	97		102		70-130	%	04.16.19 09:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085873

Parent Sample Id: 621041-010

Matrix: Soil

MS Sample Id: 621041-010 S

Prep Method: SW5030B

Date Prep: 04.16.19

MSD Sample Id: 621041-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0899	89	0.0919	92	70-130	2	35	mg/kg	04.16.19 09:41	
Toluene	<0.000460	0.101	0.0892	88	0.0900	91	70-130	1	35	mg/kg	04.16.19 09:41	
Ethylbenzene	<0.000570	0.101	0.0923	91	0.0930	94	70-130	1	35	mg/kg	04.16.19 09:41	
m,p-Xylenes	<0.00102	0.202	0.185	92	0.186	93	70-130	1	35	mg/kg	04.16.19 09:41	
o-Xylene	<0.00202	0.101	0.0932	92	0.0936	94	70-130	0	35	mg/kg	04.16.19 09:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	04.16.19 09:41
4-Bromofluorobenzene	110		110		70-130	%	04.16.19 09:41

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



Page 1 of 1

Work Order Comments	
Program: UST/PST	☐ RP ☐ Brownfields ☐ C ☐ perfund ☐
State of Project:	
Reporting Level II	☐ Level III ☐ ST/UST ☐ RP ☐ vel IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

Project Name:	Hastelco Vista DT Federal	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:		Routine ☐		
P.O. Number:	2RP-5231	Rush: 1 day		
Sampler's Name:	Robert M.	Due Date: 04/18/99		
SAMPLE RECEIPT Temperature (°C): 0-376.5 Received In tact: ☒ Yes ☐ No Cooler Custody Seals: Yes ☒ No Sample Custody Seals: Yes ☒ No Correction Factor: -0.1 Total Containers:				
Temp Blank: Yes ☒ No Wet Ice: Yes ☒ No Thermometer: <i>100</i>			of Containers A 8015) PA 8021) (EPA 300.0)	
TAT starts the day received by the lab. If received by 12:00				

Sample Identification						Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EP)	BTEX (EP)	Chloride	Sample Comments									
BH06						S	04/15/19	0845	3'	1	X	X	X	absorbate ↓ ↑									
BH06A								0850	4'		X	X	X										
BH07								0935	2'		X	X	X										
BH07A						↑	↑	1005	4'	↑	X	X	X										

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

For service, Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5. for each sample submitted to Xenoco, 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 			2		02-15-19 142
3			4		04/16/19 1231
5			6		

ORIGIN ID: CACA (281) 240-4200
 SAMPLE CUSTODY
 XENCO LABORATORIES NM
 1089 N CANAL ST

CARLSBAD, NM 88220
 UNITED STATES US

SHIP DATE: 15APR19
 ACTWGT: 20.00 LB
 CAD: 114488676/NET14100
 DIMS: 13x9x9 IN

BILL SENDER

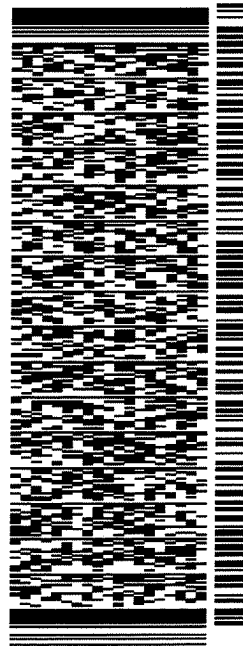
TO **SAMPLE RECEIVING**

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

REF: (432) 704-5440

PO: INV: DEPT:



J191019010701uv

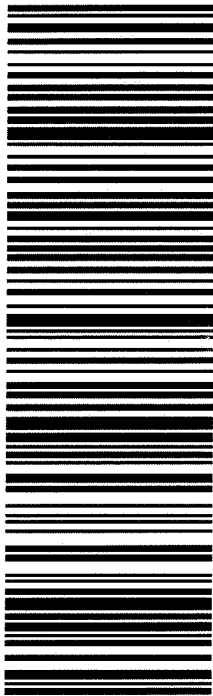
565J11D7E5/23AD

TRK# 7749 7566 7890
 0201

TUE - 16 APR HOLD
PRIORITY OVERNIGHT

41 MAFA

HLD 79706
 TX-US LBB



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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 04/16/2019 12:31:00 PM

Work Order #: 621238

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)?	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

Brianna Teel

Date: 04/16/2019

Checklist reviewed by:

Kalei Stout

Kalei Stout

Date: 04/16/2019

Analytical Report 621239

for
LT Environmental, Inc.

Project Manager: Adrian Baker

Hasta La Vista DI Federal

18-APR-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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

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

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



18-APR-19

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

Reference: XENCO Report No(s): **621239**
Hasta La Vista DI Federal
Project Address: ---

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 621239. 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. 621239 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout

Midland Laboratory Director

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	04-15-19 11:30	0 - 4 ft	621239-001
SW02	S	04-15-19 11:25	0 - 4 ft	621239-002
SW03	S	04-15-19 11:35	0 - 4 ft	621239-003
SW04	S	04-15-19 11:40	0 - 4 ft	621239-004
FS01	S	04-15-19 11:45	4.5 ft	621239-005
FS02	S	04-15-19 11:50	4.5 ft	621239-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hasta La Vista DI Federal*

Project ID: ---
Work Order Number(s): 621239

Report Date: 18-APR-19
Date Received: 04/16/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085867 BTEX by EPA 8021B

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



Certificate of Analysis Summary 621239

LT Environmental, Inc., Arvada, CO

Project Name: Hasta La Vista DI Federal



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

Date Received in Lab: Tue Apr-16-19 12:34 pm
Report Date: 18-APR-19
Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	621239-001	621239-002	621239-003	621239-004	621239-005	621239-006
	<i>Field Id:</i>	SW01	SW02	SW03	SW04	FS01	FS02
	<i>Depth:</i>	0-4 ft	0-4 ft	0-4 ft	0-4 ft	4.5- ft	4.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-15-19 11:30	Apr-15-19 11:25	Apr-15-19 11:35	Apr-15-19 11:40	Apr-15-19 11:45	Apr-15-19 11:50
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45	Apr-16-19 12:45
	<i>Analyzed:</i>	Apr-16-19 18:28	Apr-16-19 18:47	Apr-16-19 19:06	Apr-16-19 19:25	Apr-16-19 19:44	Apr-16-19 20:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00403 0.00403	<0.00399 0.00399	<0.00402 0.00402	<0.00402 0.00402	<0.00398 0.00398	<0.00400 0.00400
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00	Apr-16-19 14:00
	<i>Analyzed:</i>	Apr-16-19 16:25	Apr-16-19 16:44	Apr-16-19 16:51	Apr-16-19 16:57	Apr-16-19 17:04	Apr-17-19 07:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		141 5.00	139 4.95	359 4.95	1110 4.95	143 4.95	788 5.03
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00	Apr-16-19 17:00
	<i>Analyzed:</i>	Apr-17-19 01:09	Apr-17-19 02:07	Apr-17-19 02:26	Apr-17-19 02:46	Apr-17-19 03:05	Apr-17-19 03:25
	<i>Units/RL:</i>	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	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<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	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW01**
Lab Sample Id: 621239-001

Matrix: Soil
Date Collected: 04.15.19 11.30

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	5.00	mg/kg	04.16.19 16.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 01.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 01.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 01.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 01.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 01.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 01.09	
o-Terphenyl	84-15-1	103	%	70-135	04.17.19 01.09	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW01**
Lab Sample Id: 621239-001

Matrix: Soil
Date Collected: 04.15.19 11.30

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.16.19 18.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.16.19 18.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.16.19 18.28		
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.16.19 18.28		



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW02**
Lab Sample Id: 621239-002

Matrix: Soil
Date Collected: 04.15.19 11.25

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	139	4.95	mg/kg	04.16.19 16.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 02.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 02.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 02.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 02.07	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 02.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.17.19 02.07	
o-Terphenyl	84-15-1	101	%	70-135	04.17.19 02.07	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW02**
Lab Sample Id: 621239-002

Matrix: Soil
Date Collected: 04.15.19 11.25

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B
Tech: SCM
Analyst: SCM
Seq Number: 3085867

Date Prep: 04.16.19 12.45

Prep Method: SW5030B
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.16.19 18.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.19 18.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	04.16.19 18.47		
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.16.19 18.47		



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW03**
Lab Sample Id: 621239-003

Matrix: Soil
Date Collected: 04.15.19 11.35

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	359	4.95	mg/kg	04.16.19 16.51		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 02.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 02.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 02.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 02.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 02.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 02.26	
o-Terphenyl	84-15-1	103	%	70-135	04.17.19 02.26	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW03**
Lab Sample Id: 621239-003

Matrix: Soil
Date Collected: 04.15.19 11.35

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Seq Number: 3085867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.16.19 19.06	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.16.19 19.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.16.19 19.06		
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.16.19 19.06		



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW04**
Lab Sample Id: 621239-004

Matrix: Soil
Date Collected: 04.15.19 11.40

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300
Tech: SPC
Analyst: SPC
Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1110	4.95	mg/kg	04.16.19 16.57		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 02.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 02.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 02.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 02.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 02.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.17.19 02.46	
o-Terphenyl	84-15-1	104	%	70-135	04.17.19 02.46	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **SW04**
Lab Sample Id: 621239-004

Matrix: Soil
Date Collected: 04.15.19 11.40

Date Received: 04.16.19 12.34
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085867

Date Prep: 04.16.19 12.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.16.19 19.25	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.16.19 19.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.16.19 19.25		
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.16.19 19.25		



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **FS01**
Lab Sample Id: 621239-005

Matrix: Soil
Date Collected: 04.15.19 11.45

Date Received: 04.16.19 12.34
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	143	4.95	mg/kg	04.16.19 17.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 03.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 03.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 03.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 03.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 03.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 03.05	
o-Terphenyl	84-15-1	102	%	70-135	04.17.19 03.05	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **FS01**
Lab Sample Id: 621239-005

Matrix: Soil
Date Collected: 04.15.19 11.45

Date Received: 04.16.19 12.34
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085867

Date Prep: 04.16.19 12.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.16.19 19.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.16.19 19.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	04.16.19 19.44		
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.16.19 19.44		



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **FS02**
Lab Sample Id: 621239-006

Matrix: Soil
Date Collected: 04.15.19 11.50

Date Received: 04.16.19 12.34
Sample Depth: 4.5 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3086010

Date Prep: 04.16.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	788	5.03	mg/kg	04.17.19 07.30		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085983

Date Prep: 04.16.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.17.19 03.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.17.19 03.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.17.19 03.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.17.19 03.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.17.19 03.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.17.19 03.25	
o-Terphenyl	84-15-1	103	%	70-135	04.17.19 03.25	



Certificate of Analytical Results 621239



LT Environmental, Inc., Arvada, CO

Hasta La Vista DI Federal

Sample Id: **FS02**
Lab Sample Id: 621239-006

Matrix: Soil
Date Collected: 04.15.19 11.50

Date Received: 04.16.19 12.34
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085867

Prep Method: SW5030B

% Moisture:

Date Prep: 04.16.19 12.45

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.16.19 20.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.19 20.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.16.19 20.03		
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.16.19 20.03		

- 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 621239

LT Environmental, Inc.
Hasta La Vista DI Federal

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

MB Sample Id: 7675970-1-BLK

Matrix: Solid

LCS Sample Id: 7675970-1-BKS

Prep Method: E300P

Date Prep: 04.16.19

LCSD Sample Id: 7675970-1-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	254	102	251	100	90-110	1	20	mg/kg	04.16.19 16:12	

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

Parent Sample Id: 621114-005

Matrix: Soil

MS Sample Id: 621114-005 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621114-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	108	248	348	97	323	87	90-110	7	20	mg/kg	04.17.19 08:09	X

Analytical Method: Chloride by EPA 300

Seq Number: 3086010

Parent Sample Id: 621239-001

Matrix: Soil

MS Sample Id: 621239-001 S

Prep Method: E300P

Date Prep: 04.16.19

MSD Sample Id: 621239-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	250	395	102	390	100	90-110	1	20	mg/kg	04.16.19 16:31	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085983

MB Sample Id: 7675909-1-BLK

Matrix: Solid

LCS Sample Id: 7675909-1-BKS

Prep Method: TX1005P

Date Prep: 04.16.19

LCSD Sample Id: 7675909-1-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	1060	106	993	99	70-135	7	20	mg/kg	04.16.19 20:57	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1010	101	70-135	8	20	mg/kg	04.16.19 20:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		129		128		70-135	%	04.16.19 20:57
o-Terphenyl	115		118		125		70-135	%	04.16.19 20:57

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

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

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 621239

LT Environmental, Inc.
Hasta La Vista DI Federal

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085983

Parent Sample Id: 621114-001

Matrix: Soil

MS Sample Id: 621114-001 S

Prep Method: TX1005P

Date Prep: 04.16.19

MSD Sample Id: 621114-001 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)	12.7	999	1000	99	1000	99	70-135	0	20	mg/kg	04.16.19 21:56	
Diesel Range Organics (DRO)	13.9	999	1050	104	1060	105	70-135	1	20	mg/kg	04.16.19 21:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	04.16.19 21:56
o-Terphenyl	123		113		70-135	%	04.16.19 21:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085867

MB Sample Id: 7675871-1-BLK

Matrix: Solid

LCS Sample Id: 7675871-1-BKS

Prep Method: SW5030B

Date Prep: 04.16.19

LCSD Sample Id: 7675871-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.0990	98	0.0994	100	70-130	0	35	mg/kg	04.16.19 08:57	
Toluene	<0.000458	0.101	0.0996	99	0.100	100	70-130	0	35	mg/kg	04.16.19 08:57	
Ethylbenzene	<0.000568	0.101	0.0914	90	0.0918	92	70-130	0	35	mg/kg	04.16.19 08:57	
m,p-Xylenes	<0.00102	0.201	0.182	91	0.182	91	70-130	0	35	mg/kg	04.16.19 08:57	
o-Xylene	<0.000346	0.101	0.0919	91	0.0921	92	70-130	0	35	mg/kg	04.16.19 08:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		100		101		70-130	%	04.16.19 08:57
4-Bromofluorobenzene	82		95		96		70-130	%	04.16.19 08:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085867

Parent Sample Id: 621040-001

Matrix: Soil

MS Sample Id: 621040-001 S

Prep Method: SW5030B

Date Prep: 04.16.19

MSD Sample Id: 621040-001 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	0.0994	0.0887	89	0.0929	93	70-130	5	35	mg/kg	04.16.19 09:35	
Toluene	<0.000453	0.0994	0.0894	90	0.0929	93	70-130	4	35	mg/kg	04.16.19 09:35	
Ethylbenzene	<0.000561	0.0994	0.0827	83	0.0842	84	70-130	2	35	mg/kg	04.16.19 09:35	
m,p-Xylenes	<0.00101	0.199	0.163	82	0.167	84	70-130	2	35	mg/kg	04.16.19 09:35	
o-Xylene	<0.000342	0.0994	0.0831	84	0.0850	85	70-130	2	35	mg/kg	04.16.19 09:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	04.16.19 09:35
4-Bromofluorobenzene	97		102		70-130	%	04.16.19 09:35

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

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

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

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



Chain of Custody

Work Order No:

1021834

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 (480-355-0800) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle L. Hitt
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad NM
Phone:	432.704.5178	Email:	

Program: UST/PST	☐ RP	☐ Rowntfields	☐ C	☐ Pertund
State of Project:				
Reporting Level II	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV
Deliverables: EDD	☐ ADAPT	☐ Other:		

Project Name:	Hasta la Vista DT Federal	Turn Around		Work Order Notes
Project Number:		Routine ☐		
P.O. Number:	2RP-5231	Rush: 1 day		
Sampler's Name:	Robert M.	Due Date: 01/18/19		

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	0.31	Thermometer:		
Received In tact:	Yes ☒ No ☐	Correction Factor:		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:		
Sample Custody Seals:	Yes ☒ No ☐ N/A			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
SW01	S	04/15/19	130	0-4'	1	X	X	X		
SW02			125	0-4'		X	X	X		
SW03			1135	0-4'		X	X	X		
SW04			1140	0-4'		X	X	X		
FS01			1145	4.5'		X	X	X		
FS02			1150	4.5'		X	X	X		

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti 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 Ti U	1631 / 245.1 / 7470 / 7471 : Hg	

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time

ORIGIN ID:CAOA (281) 240-4200
 SAMPLE CUSTODY
 XENCO LABORATORIES NM
 1089 N CANAL ST
 CARLSBAD, NM 88220
 UNITED STATES US

SHIP DATE: 15APR19
 ACTWGT: 20.00 LB
 CAD: 114488676/NINET4100
 DIMS: 13x9x9 IN
 BILL SENDER

TO **SAMPLE RECEIVING**

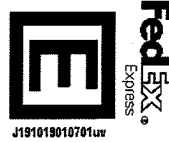
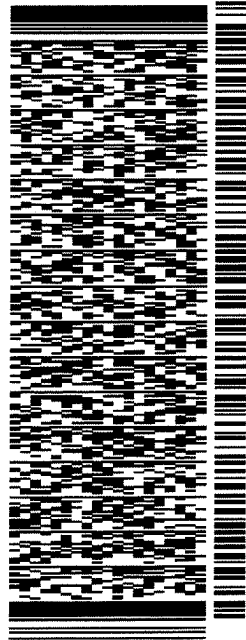
3600 S COUNTY ROAD 1276

MIDLAND TX 79706

(432) 704-5440

REF:

PO. DEPT.



J191015010701ur

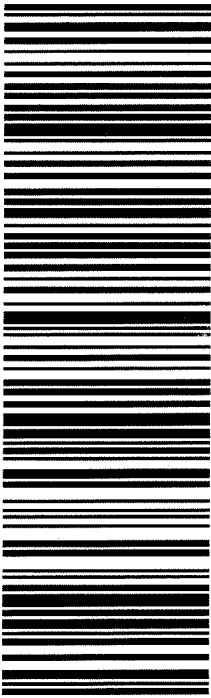
565J1/D7E5/23AD

TRK#
 0201
7749 7566 7890

TUE - 16 APR HOLD
PRIORITY OVERNIGHT

41 MAFA

HLD
79706
 TX-US
LBB



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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 04/16/2019 12:34:13 PM

Work Order #: 621239

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)?	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

Brianna Teel

Date: 04/16/2019

Checklist reviewed by:

Kalei Stout

Kalei Stout

Date: 04/16/2019





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

Compliance · Engineering · Remediation

Identifier: BHO1

Date: 04/06/19

Project Name: *la Vista
DI Federal*

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M

Method: *Hand Auger*

Lat/Long:

Field Screening:

Hole Diameter: 3"

Total Depth: 9'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
					2			
					3			
					4			
					5	5'	S	<i>Excavated</i>
1355	dry	2572	2.5	Y		5'	S	silty sand Brown P _f
1358	dry	2572	1.8	Y		6'	S	silty sand Brown P _f
1400	dry	2572	1.7	Y		7'	S	silty sand Brown P _f
1405	dry	1200	1.1	N		8'	S	silty sand Brown P _f
04/06/19 1615	dry	380	0.8	N		9'	S	silty sand Brown P _f
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier: BH02

Date: 04/05/19

Project Name:
Hasta La Vista
DI Federal

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M.

Method: Bore hole

Lat/Long:

Field Screening:

Hole Diameter: 3"

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry		8.3	N		0	1'	S	silty Sand Brown PG
dry		7.8	N		1	2'	S	silty Sand Brown PG
dry		6.7	N		2	3'	S	silty Sand Brown PG
dry	200	5.5	N		3	4'	S	silty Sand Brown PG
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier: BH03

Date: 04/05/19

Project Name:
Hasta la Vista
PI Federal

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M.

Method: Hand Auger

Lat/Long:

Field Screening:

Hole Diameter: 3"

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry		4.1	N		0	1'	S	silty sand Brown PG
dry		2.5	N		1	2'	S	silty sand Brown PG
dry		4.2	N		2	3'	S	silty sand Brown PG
dry	218	3.8	N		3	4'	S	silty sand Brown PG
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

12
H20
12
H25
12
H30
12
H35



LT Environmental, Inc.
Remediation Services



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

Compliance · Engineering · Remediation

Identifier:

BH04

Date:

04/05/19

Project Name:

Hasta La Vista
PI Federal

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:

Robert M.

Method:

Hand Auger

Lat/Long:

Field Screening:

Hole Diameter:

3"

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry		3.1	N		0	1'	S	silty sand Brown PG
dry		4.3	N		1	2'	S	silty sand Brown PG
dry		4.5	N		2	3'	S	silty sand Brown PG
dry	200	4.0	N		3	4'	S	silty sand Brown PG
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

1320

1323

1325

1328



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

Compliance · Engineering · Remediation

Identifier:

BH05

Date:

04/08/19

Project Name:

Hasta la Vista
DI Federal

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By:

Robert M

Method:

Hand auger

Hole Diameter:

3"

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<128	0.7	N		0	1'	S	silty sand Brown PG
dry	<128	0.8	N		2	2'	S	silty sand Brown PG
dry	<128	1.3	N		3	3'	S	silty sand Brown PG
dry	<128	1.5	N		4	4'	S	silty sand Brown PG
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

1635

1640

1655

1700



LT Environmental, Inc.
Engineering Services



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

Compliance · Engineering · Remediation

Identifier: BH06

Date: 04/15/19

Project Name: Hasta la Vista

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Robert M.

Method: Hand Auger

Lat/Long:

Field Screening:

Hole Diameter: 3"

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0825 dry	<124	2.0	N		0			
					1	1'	S	Sand trace silt Brown PG
0840 dry	<124	2.1	N		2	2'	S	sand trace silt Brown PG
0845 dry	<124	2.2	N		3	3'	S	Sand trace clay trace root light brown PG
0850 dry	<124	1.3	N		4	4'	S	Sand trace clay light brown PG
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

BH07

Date:

04/15/19

Project Name:

Hasta la Vista

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By: Robert M.

Method: Hand Auger

Hole Diameter: 3"

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
dry	<124	0.8	N		0			Silty sand PG
					1	1'	S	Brown
dry	<124	0.8	N		2	2'	S	Sand trace Clay PG
					3	3'	S	Brown
dry	<124	0.7	N		4	4'	S	Sand trace Clay PG trace root
								Brown/tan
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

0950

0955

1000

1005





View of the release area (2RP-5231).

Project: 012919021	XTO Energy, Inc. Hasta La Vista 1 DI Federal Battery	 <i>Advancing Opportunity</i>
January 29, 2019	Photographic Log	



View facing east of the excavation area (2RP-5231).

Project: 012919021	XTO Energy, Inc. Hasta La Vista 1 DI Federal Battery	 <i>Advancing Opportunity</i>
April 15, 2019	Photographic Log	



View facing west of the excavation area (2RP-5231).

Project: 012919021	XTO Energy, Inc. Hasta La Vista 1 DI Federal Battery	 <i>Advancing Opportunity</i>
April 15, 2019	Photographic Log	