

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	NAB1917639944
District RP	1RP-5568
Facility ID	
Application ID	pAB1917639436

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) NAB1917639944
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.254903° Longitude -103.604723°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mis Amigos #907H	Site Type Production Well Facility
Date Release Discovered 5/22/2019	API# (if applicable) 30-025-45285

Unit Letter	Section	Township	Range	County
P	31	23S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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)
Fresh water with Biocide	20 barrels water (containing 0.83 gallons Biocide)	0 barrels

Cause of Release

Contractor was performing pressure test on the lubricator. The truck operator left a valve open on his truck and the wireline operator opened the well master valve to check the pressure. As pressure released to the truck, fluids escaped the truck to the well pad through the hatch and no fluids were recoverable. The well was shut in and the pressure was bled off. Additional third party resources have been retained to assist with remediation.

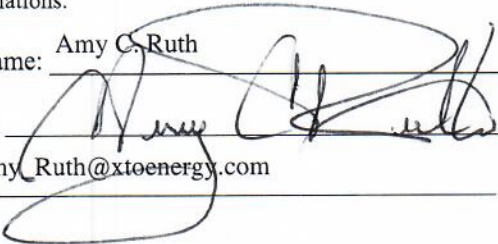
State of New Mexico
Oil Conservation Division

Incident ID	NAB1917639944
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Amy C. Ruth</u> Signature:  email: <u>Amy_Ruth@xtoenergy.com</u>	Title: <u>SH&E Coordinator</u> Date: <u>6/5/2019</u> Telephone: <u>575-689-3380</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>6/25/2019</u>	

Incident ID	
District RP	1RP-5568
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?	<u> >100 </u> (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.

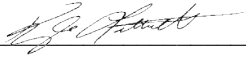
Characterization Report Checklist: <i>Each of the following items must be included in the report.</i> ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. ☒ Field data ☒ Data table of soil contaminant concentration data ☒ Depth to water determination ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release ☒ Boring or excavation logs ☒ Photographs including date and GIS information ☒ Topographic/Aerial maps ☒ Laboratory data including chain of custody

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/18/2019

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

OCD Only

Received by: _____ Date: _____

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Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/18/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

October 18, 2019

District 1
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, New Mexico 88240

**RE: Closure Request
Mis Amigos #907H
Remediation Permit Number 1RP-5568
Lea County, New Mexico**

Dear To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Mis Amigos #907H (Site) in Unit P, Section 31, Township 23 South, Range 33 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to confirm the presence or absence of soil impacts following a release of fresh water with biocide at the Site. Based on the excavation activities and results of the soil sampling events, XTO is submitting this Closure Request and requesting no further action for Remediation Permit (RP) Number 1RP-5568.

RELEASE BACKGROUND

On May 22, 2019, a contractor was performing a pressure test on the lubricator. The truck operator mistakenly left a valve on the truck open while the well master valve was opened to check the pressure. As pressure released to the truck, fluids escaped through the hatch onto the surface of the caliche well pad. Approximately 20 barrels (bbls) of fresh water containing 0.83 gallons of biocide were released. No fluids were recovered. The well was shut in and pressure was bled off. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 5, 2019, and was assigned RP Number 1RP-5568 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is New Mexico Office of State Engineer (NM OSE) well C 02279, located approximately 1.76 miles northeast of the Site. The water well has a depth to groundwater of



approximately 400 feet bgs and a total depth of approximately 650 feet bgs. Ground surface elevation at the water well location is 3,684 feet above mean sea level (AMSL), which is approximately 23 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an NM OSE-identified waterbody located approximately 2.07 miles 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 potential karst area.

CLOSURE CRITERIA

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

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

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On June 17, 2019, LTE personnel was at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected eight preliminary soil samples (SS01 through SS08) within the release extent at a depth of approximately 0.5 feet bgs to assess for the presence or absence of soil impacts. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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





Based on laboratory analytical results for preliminary soil sample SS06, delineation and excavation of impacted soil was warranted. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 2.

On September 5, 2019, LTE personnel returned to the Site to conduct soil assessment activities to delineate impacted soil as indicated by laboratory analytical results and field screening. Seven potholes were advanced via track-mounted backhoe within the release extent. Potholes PH01 through PH07 were advanced to a depth of approximately 4 feet bgs. Two delineation soil samples were collected from each pothole at depths of 1 foot (PH01 through PH07) and 4 feet bgs (PH01A through PH07A). Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride. Field screening results and observations for each pothole was logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The potholes were backfilled with the soil removed. The pothole and delineation soil sample locations are depicted on Figure 3.

On September 5, 2019, LTE personnel remained on-site to oversee excavation of impacted soil as indicated by visual observations, field screening activities, and laboratory analytical results for preliminary soil sample SS06. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride. Following removal of impacted soil, LTE collected 5-point composite samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite sample was collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the sample by thoroughly mixing. Based on the shallow depth of the excavation, sample FS01 is representative of the of the sidewalls and floor of the excavation. Composite soil sample FS01 was collected from the floor of the excavation at a depth of approximately 1 foot bgs. The excavation soil sample was collected, handled, and analyzed as described above. The excavation extent and excavation soil sample location are depicted on Figure 4.

The final excavation extent measured approximately 120 square feet in area. A total of approximately 5 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in preliminary soil samples SS01 through SS05, SS07, and SS08. Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the Closure Criteria in preliminary soil sample SS06. Based on the preliminary soil sample analytical results, delineation and excavation of impacted soil was conducted.





Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH07, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for excavation soil sample FS01, collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are presented on Figure 2, Figure 3, and Figure 4, and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 4.

CONCLUSIONS

Laboratory analytical results indicated that TPH concentrations in preliminary soil sample SS06 exceeded the Closure Criteria. A total of 5 cubic yards of impacted soil were excavated, and laboratory analytical results for the excavation soil sample (FS01), collected from the final excavation extent, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Delineation soil sampling was completed within the release extent. Laboratory analytical results for the delineation soil samples (PH01/PH01A through PH07/PH07A) indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Based on the excavation and delineation soil sample analytical results, no further remediation was required.

Initial response efforts and excavation of impacted soil have mitigated impacts at this site. XTO requests no further action for RP Number 1RP-5568. 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 Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

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





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 Form C-141 (1RP-5568)
- Attachment 2 Photographic Log
- Attachment 3 Lithologic / Soil Sample Logs
- Attachment 4 Laboratory Analytical Reports

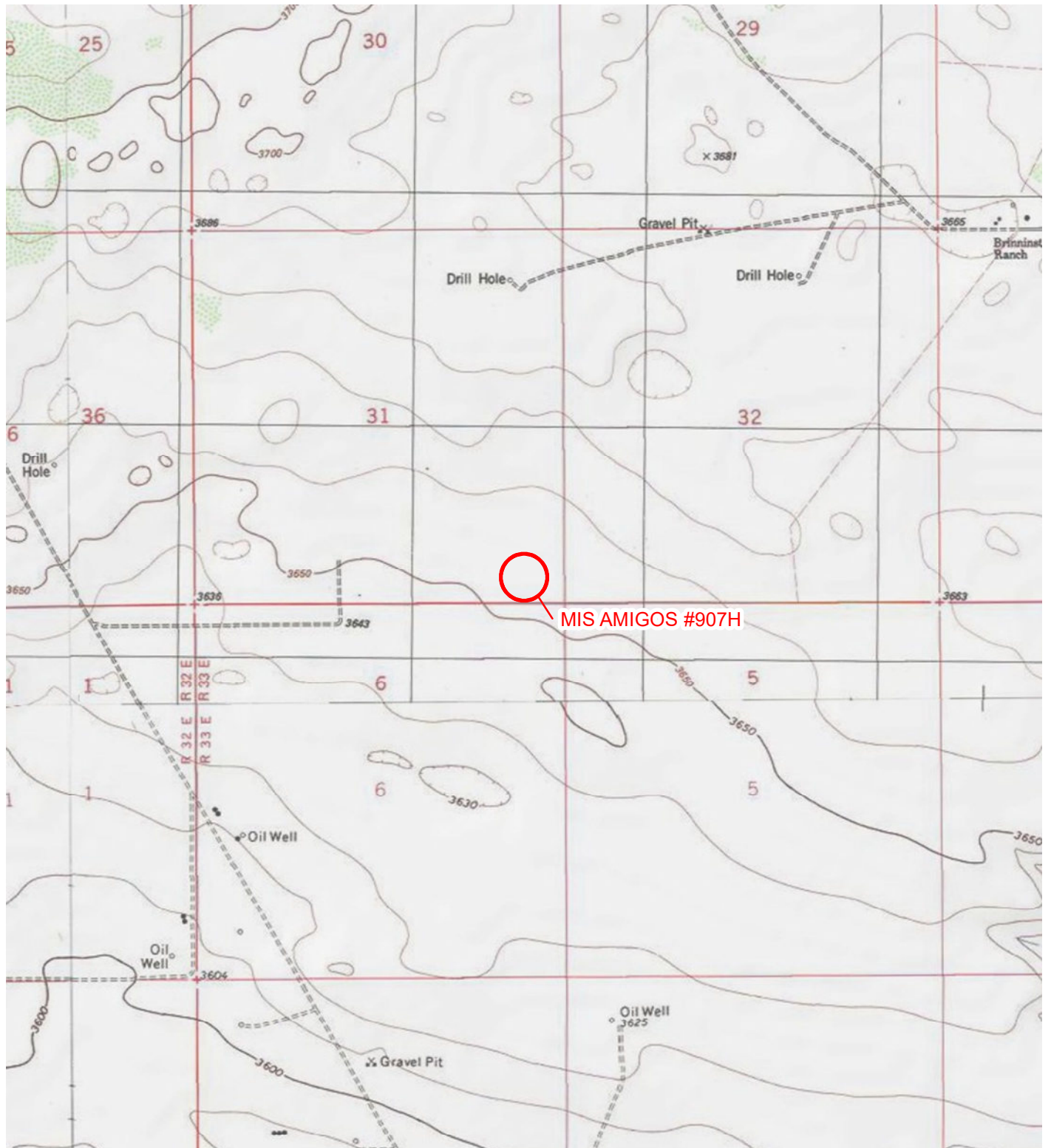


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

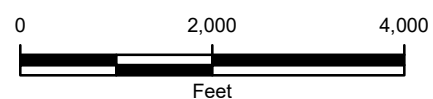


FIGURE 1
SITE LOCATION MAP
MIS AMIGOS #907H
UNIT P SEC 31 T23S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 1RP-5568

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 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
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT

SS04@0.5'
 06/17/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: 72.5
 TPH: 72.5
 Cl: 142

SS05@0.5'
 06/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 62.4

SS03@0.5'
 06/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 518
 TPH: 550
 Cl: 583

SS06@0.5'
 06/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: **5,650**
 TPH: **5,800**
 Cl: 2,220

SS02@0.5'
 06/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 51.7
 TPH: 51.7
 Cl: 1,450

SS07@0.5'
 06/17/2019
 B: <0.00199
 BTEX: 0.00767
 GRO+DRO: 66.8
 TPH: 66.8
 Cl: 886

SS08@0.5'
 06/17/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 109

SS01@0.5'
 06/17/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 86.9
 TPH: 111
 Cl: 3,300

LEGEND



RELEASE LOCATION



PRELIMINARY SOIL SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA

APPROXIMATE PAD BOUNDARY



RELEASE EXTENT

B: BENZENE

BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
 AND TOTAL XYLENES

GRO: GASOLINE RANGE ORGANICS

DRO: DIESEL RANGE ORGANICS

TPH: TOTAL PETROLEUM HYDROCARBONS

Cl: CHLORIDE

NMAC: NEW MEXICO ADMINISTRATIVE CODE

NMOCD: NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 1RP-5568

IMAGE COURTESY OF ESRI

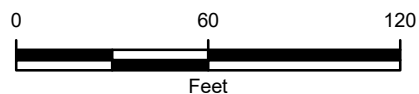


FIGURE 2
 PRELIMINARY SOIL SAMPLE LOCATIONS
 MIS AMIGOS #907H
 UNIT P SEC 31 T23S R33E
 LEA COUNTY, NEW MEXICO
 XTO ENERGY, INC.



SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 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
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT

PH01@1'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <24.9
 TPH: <24.9
 Cl: 10.6

PH01A@4'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: 12.4

PH04@1'
 09/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <24.9
 TPH: <24.9
 Cl: <5.03

PH04A@4'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <5.00

PH02@1'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: 5.34

PH02A@4'
 09/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <5.04

PH05A@4'
 09/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <5.00

PH05@1'
 09/05/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <5.00

PH03@1'
 09/05/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <4.99

PH03A@4'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <24.9
 TPH: <24.9
 Cl: 7.22

PH06@1'
 09/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <24.9
 TPH: <24.9
 Cl: 6.68

PH06A@4'
 09/05/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: 20.6

PH07@1'
 09/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <24.9
 TPH: <24.9
 Cl: 12.7

PH07A@4'
 09/05/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <25.0
 TPH: <25.0
 Cl: <5.00

LEGEND



RELEASE LOCATION



DELINEATION SOIL SAMPLE IN COMPLIANCE
 WITH APPLICABLE CLOSURE CRITERIA

APPROXIMATE PAD BOUNDARY



RELEASE EXTENT

B: BENZENE

BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
 AND TOTAL XYLENES

GRO: GASOLINE RANGE ORGANICS

DRO: DIESEL RANGE ORGANICS

TPH: TOTAL PETROLEUM HYDROCARBONS

Cl: CHLORIDE

NMAC: NEW MEXICO ADMINISTRATIVE CODE

NMOCD: NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 1RP-5568

IMAGE COURTESY OF ESRI

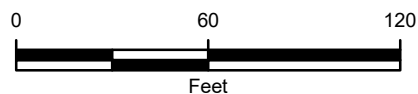


FIGURE 3
 DELINEATION SOIL SAMPLE LOCATIONS
 MIS AMIGOS #907H
 UNIT P SEC 31 T23S R33E
 LEA COUNTY, NEW MEXICO
 XTO ENERGY, INC.



SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
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
ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
<: INDICATES RESULT IS LESS THAN THE
LABORATORY REPORTING LIMIT

FS01@1'
09/05/2019
B: <0.00101
BTEX: <0.00101
GRO+DRO: <24.9
TPH: <24.9
Cl: 16.0

LEGEND



RELEASE LOCATION



EXCAVATION SOIL SAMPLE IN COMPLIANCE
WITH APPLICABLE CLOSURE CRITERIA

— APPROXIMATE PAD BOUNDARY



EXCAVATION EXTENT

B: BENZENE

BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE,
AND TOTAL XYLENES

GRO: GASOLINE RANGE ORGANICS

DRO: DIESEL RANGE ORGANICS

TPH: TOTAL PETROLEUM HYDROCARBONS

Cl: CHLORIDE

NMAC: NEW MEXICO ADMINISTRATIVE CODE

NMOCD: NEW MEXICO OIL CONSERVATION DIVISION

NOTE: REMEDIATION PERMIT NUMBER 1RP-5568

IMAGE COURTESY OF ESRI

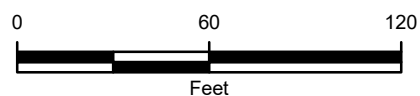


FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
MIS AMIGOS #907H
UNIT P SEC 31 T23S R33E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.



**TABLE 1
SOIL ANALYTICAL RESULTS**

**MIS AMIGOS #907H
REMEDATION PERMIT NUMBER 1RP-5568
LEA 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)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	86.9	24.3	86.9	111	3,300
SS02	0.5	6/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	51.7	<15.0	51.7	51.7	1,450
SS03	0.5	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	518	31.9	518	550	583
SS04	0.5	06/17/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	72.5	<15.0	72.5	72.5	142
SS05	0.5	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	62.4
SS06	0.5	06/17/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.9	5,650	145	5,650	5,800	2,220
SS07	0.5	06/17/2019	<0.00199	<0.00199	<0.00199	0.00767	0.00767	<15.0	66.8	<15.0	66.8	66.8	886
SS08	0.5	06/17/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	109
PH01	1	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	10.6
PH01A	4	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	12.4
PH02	1	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	5.34
PH02A	4	09/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	<5.04
PH03	1	09/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	<4.99
PH03A	4	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	7.22
PH04	1	09/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	<5.03
PH04A	4	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	<5.00
PH05	1	09/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	<5.00
PH05A	4	09/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	<5.00
PH06	1	09/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	6.68
PH06A	4	09/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	20.6
PH07	1	09/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	12.7
PH07A	4	09/05/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	<5.00
FS01	1	09/05/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	16.0
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCDC - New Mexico Oil Conservation Division

NE - not established

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

TPH - total petroleum hydrocarbons



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	NAB1917639944
District RP	1RP-5568
Facility ID	
Application ID	pAB1917639436

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) NAB1917639944
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.254903° Longitude -103.604723°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Mis Amigos #907H	Site Type Production Well Facility
Date Release Discovered 5/22/2019	API# (if applicable) 30-025-45285

Unit Letter	Section	Township	Range	County
P	31	23S	33E	Lea

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	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)
Fresh water with Biocide	20 barrels water (containing 0.83 gallons Biocide)	0 barrels

Cause of Release

Contractor was performing pressure test on the lubricator. The truck operator left a valve open on his truck and the wireline operator opened the well master valve to check the pressure. As pressure released to the truck, fluids escaped the truck to the well pad through the hatch and no fluids were recoverable. The well was shut in and the pressure was bled off. Additional third party resources have been retained to assist with remediation.

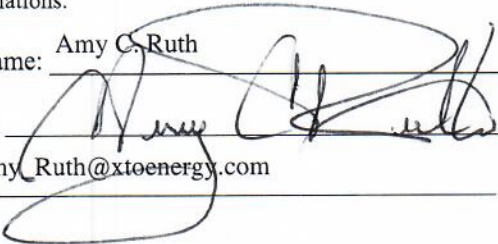
State of New Mexico
Oil Conservation Division

Incident ID	NAB1917639944
District RP	1RP-5568
Facility ID	
Application ID	pAB1917639436

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

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> 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: <u>Amy C. Ruth</u> Signature:  email: <u>Amy_Ruth@xtoenergy.com</u>	Title: <u>SH&E Coordinator</u> Date: <u>6/5/2019</u> Telephone: <u>575-689-3380</u>
<u>OCD Only</u> Received by: <u>Amalia Bustamante</u> Date: <u>6/25/2019</u>	

Incident ID	
District RP	1RP-5568
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?	<u> >100 </u> (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.

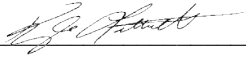
Characterization Report Checklist: <i>Each of the following items must be included in the report.</i> ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. ☒ Field data ☒ Data table of soil contaminant concentration data ☒ Depth to water determination ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release ☒ Boring or excavation logs ☒ Photographs including date and GIS information ☒ Topographic/Aerial maps ☒ Laboratory data including chain of custody

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

Incident ID	
District RP	1RP-5568
Facility ID	
Application ID	

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

Printed Name: _____ Kyle Littrell _____ Title: _____ SH&E Supervisor _____

Signature: _____  _____ Date: _____ 10/18/2019 _____

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	1RP-5568
Facility ID	
Application ID	

Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 10/18/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



Eastern view of release area during site assessment activities.

Project: 012919108	XTO Energy, Inc. Mis Amigos #907H	 <i>Advancing Opportunity</i>
June 17, 2019	Photographic Log	



Eastern view of final excavation extent during confirmation soil sampling activities.

Project: 012919108	XTO Energy, Inc. Mis Amigos #907H	 <i>Advancing Opportunity</i>
September 5, 2019	Photographic Log	





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

Compliance · Engineering · Remediation

Identifier:

PH01

Date:

09/05/19

Project Name:

MisAmigos 907H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By: Fatima Smith

Method:

Hole Diameter:

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.3	N	PH01	0		S	SP-SM, reddish brwn, poorly graded, low to med plasticity, no odor, organic matter throughout ↓
Dry	"	0.9	N		1		S	
					2		S	
					3			
Dry	"	1.7	N	PH01A	4		S	deepest sample @ 4'
					5			
					6			
					8			
					9			
					10			
					11			
					12			



LT Environmental, Inc.
A Subsidiary of



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

Compliance · Engineering · Remediation

Identifier:

PH02

Date:

09/05/19

Project Name:

Mis Amigos 907H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith

Method:

Lat/Long:

Field Screening:

Hole Diameter:

Total Depth: 41

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks			
Dry	<179	2.2	N	PH02	0		S	SP-SM, poorly graded, reddish brwn, low plasticity, no odor ↓ deepest sample @ 4'			
Dry	"	2.1	N		1		S				
					2		S				
					3						
Dry	"	1.6	N	PH02A	4		S				
Fateh											
									5		
									6		
									7		
									8		
									9		
									10		
									11		
12											



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

Compliance · Engineering · Remediation

Identifier:

PH03

Date:

09/05/19

Project Name:

Mis Amigos 9074

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith

Method:

Lat/Long:

Field Screening:

Hole Diameter:

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.9	N	PH03	0		S	SP-SM, reddish brwn, poorly graded, no odor, low plasticity ↓ deepest sample @ 4'
Dry	"	2.7	N		1		S	
					2		S	
					3			
Dry	"	1.7	N	PH03A	4		S	
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

PH04

Date:

09/05/19

Project Name:

Mis Amigos 907H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith

Method:

Lat/Long:

Field Screening:

Hole Diameter:

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.0	N	PH04	0		S	SP-SM, reddish brwn, poorly graded, low plasticity, no odor ↓ deepest sample @ 4'
Dry	"	2.7	N		1		S	
					2		S	
					3		S	
Dry	"	2.4	N	PH04A	4		S	
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

PH05

Date:

09/05/19

Project Name:

Mis Amigos 907H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By: Fatima Smith

Method:

Hole Diameter:

Total Depth: 4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.9	N	PH05	0		S	SP-SM, reddish brwn, poorly graded, low-med plasticity, no odor ↓
Dry	"	1.4	N		1		S	
					2			
					3			
Dry	"	0.8	N	PH05A	4		S	deepest sample @ 4'
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

PH00

Date:

09/05/19

Project Name:

Mis Amigos 90TH

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Fatima Smith

Method:

Lat/Long:

Field Screening:

Hole Diameter:

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	1.0	N	PH06	0		S	SP-SM, reddish brwn, low plasticity, poorly graded, no odor ↓ deepest sample @ 4'
Dry	"	0.7	N		1		S	
					2		S	
					3			
Dry	"	0.1	N	PH06A	4		S	
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Compliance · Engineering · Remediation

Identifier:

PH07

Date:

09/05/19

Project Name:

Mis Amigos 907H

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By: Fatima Smith

Method:

Hole Diameter:

Total Depth:

4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.7	N	PH07	0			SP-SM, poorly graded, reddish brown, low plasticity, no odor ↓ deepest sample @ 4'
					1		S	
Dry	"	0.0	N		2		S	
					3			
Dry	"	0.2	N	PH07A	4		S	
					5			
					6			
					8			
					9			
					10			
					11			
					12			



Analytical Report 628190

for
LT Environmental, Inc.

Project Manager: Dan Moir
Mis Amigos 907H (2RP-4958)

012919108

01-JUL-19

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

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

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

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



01-JUL-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **628190**

Mis Amigos 907H (2RP-4958)

Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 628190. 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. 628190 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.

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Sample Cross Reference 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	06-17-19 16:10	0.5 ft	628190-001
SS02	S	06-17-19 16:15	0.5 ft	628190-002
SS03	S	06-17-19 16:20	0.5 ft	628190-003
SS04	S	06-17-19 16:30	0.5 ft	628190-004
SS05	S	06-17-19 17:03	0.5 ft	628190-005
SS06	S	06-17-19 17:04	0.5 ft	628190-006
SS07	S	06-17-19 17:05	0.5 ft	628190-007
SS08	S	06-17-19 17:06	0.5 ft	628190-008



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Mis Amigos 907H (2RP-4958)*

Project ID: 012919108
Work Order Number(s): 628190

Report Date: 01-JUL-19
Date Received: 06/19/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093372 Chloride by EPA 300

Lab Sample ID 628190-007 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 628190-007, -008.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3094000 BTEX by EPA 8021B

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



Certificate of Analysis Summary 628190

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H (2RP-4958)



Project Id: 012919108
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 01-JUL-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628190-001	628190-002	628190-003	628190-004	628190-005	628190-006
	Field Id:	SS01	SS02	SS03	SS04	SS05	SS06
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-17-19 16:10	Jun-17-19 16:15	Jun-17-19 16:20	Jun-17-19 16:30	Jun-17-19 17:03	Jun-17-19 17:04
BTEX by EPA 8021B	Extracted:	Jun-29-19 14:05	Jun-29-19 14:05	Jun-29-19 14:05	Jun-29-19 14:05	Jun-29-19 14:05	Jun-29-19 14:05
	Analyzed:	Jun-30-19 17:26	Jun-30-19 17:49	Jun-30-19 19:06	Jun-30-19 19:29	Jun-30-19 19:52	Jun-30-19 20:15
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00400 0.00400	<0.00401 0.00401	<0.00402 0.00402	<0.00401 0.00401	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	Extracted:	Jun-22-19 19:00	Jun-22-19 19:00	Jun-22-19 19:00	Jun-22-19 19:00	Jun-22-19 19:00	Jun-22-19 19:00
	Analyzed:	Jun-23-19 07:18	Jun-23-19 07:26	Jun-23-19 07:34	Jun-23-19 07:43	Jun-23-19 07:51	Jun-23-19 07:59
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Chloride		3300 50.2	1450 24.9	583 24.8	142 25.2	62.4 5.00	2220 25.0
TPH by SW8015 Mod	Extracted:	Jun-24-19 11:00	Jun-24-19 11:00	Jun-24-19 11:00	Jun-24-19 11:00	Jun-24-19 11:00	Jun-24-19 11:00
	Analyzed:	Jun-24-19 15:20	Jun-24-19 15:44	Jun-24-19 16:10	Jun-24-19 16:35	Jun-24-19 17:00	Jun-25-19 11:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<74.9 74.9
Diesel Range Organics (DRO)		86.9 15.0	51.7 15.0	518 14.9	72.5 15.0	<15.0 15.0	5650 74.9
Motor Oil Range Hydrocarbons (MRO)		24.3 15.0	<15.0 15.0	31.9 14.9	<15.0 15.0	<15.0 15.0	145 74.9
Total TPH		111 15.0	51.7 15.0	550 14.9	72.5 15.0	<15.0 15.0	5800 74.9
Total GRO-DRO		86.9 15.0	51.7 15.0	518 14.9	72.5 15.0	<15.0 15.0	5650 74.9

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 628190

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H (2RP-4958)



Project Id: 012919108
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed Jun-19-19 11:40 am
Report Date: 01-JUL-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628190-007	628190-008				
	Field Id:	SS07	SS08				
	Depth:	0.5- ft	0.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Jun-17-19 17:05	Jun-17-19 17:06				
BTEX by EPA 8021B	Extracted:	Jun-29-19 14:05	Jun-29-19 14:05				
	Analyzed:	Jun-30-19 20:39	Jun-30-19 21:02				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00199 0.00199				
Toluene		<0.00199 0.00199	<0.00199 0.00199				
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199				
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398				
o-Xylene		0.00767 0.00199	<0.00199 0.00199				
Total Xylenes		0.00767 0.00199	<0.00199 0.00199				
Total BTEX		0.00767 0.00199	<0.00199 0.00199				
Chloride by EPA 300	Extracted:	Jun-22-19 19:30	Jun-22-19 19:30				
	Analyzed:	Jun-24-19 15:47	Jun-24-19 16:01				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		886 5.00	109 5.00				
TPH by SW8015 Mod	Extracted:	Jun-24-19 11:00	Jun-24-19 11:00				
	Analyzed:	Jun-24-19 17:50	Jun-24-19 18:15				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0				
Diesel Range Organics (DRO)		66.8 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		66.8 15.0	<15.0 15.0				
Total GRO-DRO		66.8 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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS01**
Lab Sample Id: 628190-001

Matrix: Soil
Date Collected: 06.17.19 16.10

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3300	50.2	mg/kg	06.23.19 07.18		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 15.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	86.9	15.0	mg/kg	06.24.19 15.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	24.3	15.0	mg/kg	06.24.19 15.20		1
Total TPH	PHC635	111	15.0	mg/kg	06.24.19 15.20		1
Total GRO-DRO	PHC628	86.9	15.0	mg/kg	06.24.19 15.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	06.24.19 15.20	
o-Terphenyl	84-15-1	79	%	70-135	06.24.19 15.20	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS01**
Lab Sample Id: 628190-001

Matrix: Soil
Date Collected: 06.17.19 16.10

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.30.19 17.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 17.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.30.19 17.26		
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.30.19 17.26		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS02
Lab Sample Id: 628190-002

Matrix: Soil
Date Collected: 06.17.19 16.15

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1450	24.9	mg/kg	06.23.19 07.26		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 15.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	51.7	15.0	mg/kg	06.24.19 15.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 15.44	U	1
Total TPH	PHC635	51.7	15.0	mg/kg	06.24.19 15.44		1
Total GRO-DRO	PHC628	51.7	15.0	mg/kg	06.24.19 15.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.24.19 15.44	
o-Terphenyl	84-15-1	88	%	70-135	06.24.19 15.44	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS02
Lab Sample Id: 628190-002

Matrix: Soil
Date Collected: 06.17.19 16.15

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.30.19 17.49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 17.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.30.19 17.49		
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.30.19 17.49		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS03**
Lab Sample Id: 628190-003

Matrix: Soil
Date Collected: 06.17.19 16.20

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	583	24.8	mg/kg	06.23.19 07.34		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 16.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	518	14.9	mg/kg	06.24.19 16.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	31.9	14.9	mg/kg	06.24.19 16.10		1
Total TPH	PHC635	550	14.9	mg/kg	06.24.19 16.10		1
Total GRO-DRO	PHC628	518	14.9	mg/kg	06.24.19 16.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.24.19 16.10	
o-Terphenyl	84-15-1	102	%	70-135	06.24.19 16.10	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS03
Lab Sample Id: 628190-003

Matrix: Soil
Date Collected: 06.17.19 16.20

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.30.19 19.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 19.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	06.30.19 19.06		
4-Bromofluorobenzene	460-00-4	121	%	70-130	06.30.19 19.06		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS04**
Lab Sample Id: 628190-004

Matrix: Soil
Date Collected: 06.17.19 16.30

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	25.2	mg/kg	06.23.19 07.43		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 16.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	72.5	15.0	mg/kg	06.24.19 16.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 16.35	U	1
Total TPH	PHC635	72.5	15.0	mg/kg	06.24.19 16.35		1
Total GRO-DRO	PHC628	72.5	15.0	mg/kg	06.24.19 16.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.24.19 16.35	
o-Terphenyl	84-15-1	99	%	70-135	06.24.19 16.35	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS04**
Lab Sample Id: 628190-004

Matrix: Soil
Date Collected: 06.17.19 16.30

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.30.19 19.29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.30.19 19.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.30.19 19.29		
1,4-Difluorobenzene	540-36-3	89	%	70-130	06.30.19 19.29		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS05
Lab Sample Id: 628190-005

Matrix: Soil
Date Collected: 06.17.19 17.03

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	62.4	5.00	mg/kg	06.23.19 07.51		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 17.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.24.19 17.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 17.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.24.19 17.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.24.19 17.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.24.19 17.00	
o-Terphenyl	84-15-1	90	%	70-135	06.24.19 17.00	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS05
Lab Sample Id: 628190-005

Matrix: Soil
Date Collected: 06.17.19 17.03

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.30.19 19.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 19.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	06.30.19 19.52		
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.30.19 19.52		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS06**
Lab Sample Id: 628190-006

Matrix: Soil
Date Collected: 06.17.19 17.04

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093325

Date Prep: 06.22.19 19.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2220	25.0	mg/kg	06.23.19 07.59		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	06.25.19 11.02	U	5
Diesel Range Organics (DRO)	C10C28DRO	5650	74.9	mg/kg	06.25.19 11.02		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	145	74.9	mg/kg	06.25.19 11.02		5
Total TPH	PHC635	5800	74.9	mg/kg	06.25.19 11.02		5
Total GRO-DRO	PHC628	5650	74.9	mg/kg	06.25.19 11.02		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.25.19 11.02	
o-Terphenyl	84-15-1	83	%	70-135	06.25.19 11.02	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS06**
Lab Sample Id: 628190-006

Matrix: Soil
Date Collected: 06.17.19 17.04

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.30.19 20.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.30.19 20.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.30.19 20.15		
4-Bromofluorobenzene	460-00-4	113	%	70-130	06.30.19 20.15		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: SS07
Lab Sample Id: 628190-007

Matrix: Soil
Date Collected: 06.17.19 17.05

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093372

Date Prep: 06.22.19 19.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	886	5.00	mg/kg	06.24.19 15.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 17.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	66.8	15.0	mg/kg	06.24.19 17.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 17.50	U	1
Total TPH	PHC635	66.8	15.0	mg/kg	06.24.19 17.50		1
Total GRO-DRO	PHC628	66.8	15.0	mg/kg	06.24.19 17.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.24.19 17.50	
o-Terphenyl	84-15-1	90	%	70-135	06.24.19 17.50	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS07**
Lab Sample Id: 628190-007

Matrix: Soil
Date Collected: 06.17.19 17.05

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.19 20.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.19 20.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.19 20.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.19 20.39	U	1
o-Xylene	95-47-6	0.00767	0.00199	mg/kg	06.30.19 20.39		1
Total Xylenes	1330-20-7	0.00767	0.00199	mg/kg	06.30.19 20.39		1
Total BTEX		0.00767	0.00199	mg/kg	06.30.19 20.39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.30.19 20.39		
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.30.19 20.39		



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS08**
Lab Sample Id: 628190-008

Matrix: Soil
Date Collected: 06.17.19 17.06

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3093372

Date Prep: 06.22.19 19.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	5.00	mg/kg	06.24.19 16.01		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3093435

Date Prep: 06.24.19 11.00

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	06.24.19 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.24.19 18.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.24.19 18.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.24.19 18.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.24.19 18.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.24.19 18.15	
o-Terphenyl	84-15-1	98	%	70-135	06.24.19 18.15	



Certificate of Analytical Results 628190



LT Environmental, Inc., Arvada, CO

Mis Amigos 907H (2RP-4958)

Sample Id: **SS08**
Lab Sample Id: 628190-008

Matrix: Soil
Date Collected: 06.17.19 17.06

Date Received: 06.19.19 11.40
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: JHB

% Moisture:

Analyst: JHB

Date Prep: 06.29.19 14.05

Basis: Wet Weight

Seq Number: 3094000

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.30.19 21.02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.30.19 21.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.30.19 21.02		
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.30.19 21.02		

- 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 628190

LT Environmental, Inc.
Mis Amigos 907H (2RP-4958)

Analytical Method: Chloride by EPA 300

Seq Number: 3093325

MB Sample Id: 7680539-1-BLK

Matrix: Solid

LCS Sample Id: 7680539-1-BKS

Prep Method: E300P

Date Prep: 06.22.19

LCSD Sample Id: 7680539-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	246	98	90-110	0	20	mg/kg	06.23.19 04:02	

Analytical Method: Chloride by EPA 300

Seq Number: 3093372

MB Sample Id: 7680541-1-BLK

Matrix: Solid

LCS Sample Id: 7680541-1-BKS

Prep Method: E300P

Date Prep: 06.22.19

LCSD Sample Id: 7680541-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	267	107	266	106	90-110	0	20	mg/kg	06.24.19 15:37	

Analytical Method: Chloride by EPA 300

Seq Number: 3093325

Parent Sample Id: 628029-002

Matrix: Soil

MS Sample Id: 628029-002 S

Prep Method: E300P

Date Prep: 06.22.19

MSD Sample Id: 628029-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	246	98	245	98	90-110	0	20	mg/kg	06.23.19 04:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3093325

Parent Sample Id: 628188-007

Matrix: Soil

MS Sample Id: 628188-007 S

Prep Method: E300P

Date Prep: 06.22.19

MSD Sample Id: 628188-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	4.81	248	258	102	258	102	90-110	0	20	mg/kg	06.23.19 06:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3093372

Parent Sample Id: 628190-007

Matrix: Soil

MS Sample Id: 628190-007 S

Prep Method: E300P

Date Prep: 06.22.19

MSD Sample Id: 628190-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	886	250	1090	82	1090	82	90-110	0	20	mg/kg	06.24.19 15:52	X

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 628190

LT Environmental, Inc.
Mis Amigos 907H (2RP-4958)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3093435

MB Sample Id: 7680672-1-BLK

Matrix: Solid

LCS Sample Id: 7680672-1-BKS

Prep Method: TX1005P

Date Prep: 06.24.19

LCSD Sample Id: 7680672-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1010	101	1010	101	70-135	0	20	mg/kg	06.24.19 12:50	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	1060	106	70-135	1	20	mg/kg	06.24.19 12:50	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	102		86		88		70-135	%	06.24.19 12:50			
o-Terphenyl	102		106		107		70-135	%	06.24.19 12:50			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3093435

Parent Sample Id: 628029-001

Matrix: Soil

MS Sample Id: 628029-001 S

Prep Method: TX1005P

Date Prep: 06.24.19

MSD Sample Id: 628029-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	9.76	997	994	99	904	89	70-135	9	20	mg/kg	06.24.19 14:05	
Diesel Range Organics (DRO)	8.70	997	1070	106	987	98	70-135	8	20	mg/kg	06.24.19 14:05	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			84		74		70-135	%	06.24.19 14:05			
o-Terphenyl			94		87		70-135	%	06.24.19 14:05			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3094000

MB Sample Id: 7681034-1-BLK

Matrix: Solid

LCS Sample Id: 7681034-1-BKS

Prep Method: SW5030B

Date Prep: 06.29.19

LCSD Sample Id: 7681034-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0875	87	0.0971	97	70-130	10	35	mg/kg	06.30.19 11:55	
Toluene	<0.00201	0.101	0.0943	93	0.102	102	70-130	8	35	mg/kg	06.30.19 11:55	
Ethylbenzene	<0.00201	0.101	0.0990	98	0.106	106	70-130	7	35	mg/kg	06.30.19 11:55	
m,p-Xylenes	<0.00102	0.201	0.197	98	0.210	104	70-130	6	35	mg/kg	06.30.19 11:55	
o-Xylene	<0.000346	0.101	0.0932	92	0.102	102	70-130	9	35	mg/kg	06.30.19 11:55	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1,4-Difluorobenzene	92		91		94		70-130	%	06.30.19 11:55			
4-Bromofluorobenzene	95		95		99		70-130	%	06.30.19 11:55			

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 628190

LT Environmental, Inc.
Mis Amigos 907H (2RP-4958)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3094000

Parent Sample Id: 628868-008

Matrix: Soil

MS Sample Id: 628868-008 S

Prep Method: SW5030B

Date Prep: 06.29.19

MSD Sample Id: 628868-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0836	84	0.0872	86	70-130	4	35	mg/kg	06.30.19 12:41	
Toluene	<0.00199	0.0996	0.0875	88	0.0910	90	70-130	4	35	mg/kg	06.30.19 12:41	
Ethylbenzene	<0.00199	0.0996	0.0928	93	0.0964	95	70-130	4	35	mg/kg	06.30.19 12:41	
m,p-Xylenes	<0.00398	0.199	0.182	91	0.188	93	70-130	3	35	mg/kg	06.30.19 12:41	
o-Xylene	<0.00199	0.0996	0.0881	88	0.0901	89	70-130	2	35	mg/kg	06.30.19 12:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	06.30.19 12:41
4-Bromofluorobenzene	101		100		70-130	%	06.30.19 12:41

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

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

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. _____

over

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)794-1296
Phoenix AZ (480-355-0800) Atlanta GA (770-448-8800) Tampa FL (813-555-3932-7550)
Hobbs, NM (575-392-7550)

www.xenco.com

Page 1 of 1

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

Work Order Comments Program: UST/PST ☐ PRP ☐ brownfields ☐ RC ☐ superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ UST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	
---	--

Project Name:		Mis Amigos 907H (2RP-4958)		Turn Around		ANALYSIS REQUEST												Work Order Notes					
Project Number:		012414 108		Routine ☒																			
P.O. Number:				Rush:																			
Sampler's Name:		Benjamin Beill		Due Date:																			
SAMPLE RECEIPT				Temp Blank:		Yes ☒ No ☒		Wet Ice:		Yes ☒ No ☒													
Temperature (°C):		0870.5		Thermometer ID:		12																	
Received Intact:		Yes ☒ No ☐		Correction Factor:		-0.2																	
Cooler Custody Seals:		Yes ☒ No ☐		Total Containers:																			
Sample Custody Seals:		Yes ☒ No ☐																					
Sample Identification				Matrix		Date Sampled		Time Sampled		Depth		Number of Containers										TAT starts the day received by the lab, if received by 4:30pm Sample Comments	
SS01				S		6/17/2019		1610		0.5'		1											
SS02				S		6/17/2019		1615		0.5'		1											
SS03				S		6/17/2019		1620		0.5'		1											
SS04				S		6/17/2019		1630		0.5'		1											
SS05				S		6/17/2019		1703		0.5'		1											
SS06				S		6/17/2019		1704		0.5'		1											
SS07				S		6/17/2019		1705		0.5'		1											
SS08				S		6/17/2019		1706		0.5'		1											

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 					
2 	Christine Byers	09/15 @ 6/13/18	2 		6/18/19 8:40
3 	Food Box	6/18/19 14:00	4		6/19/19
5			6		6/19/19



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/19/2019 11:40:00 AM

Work Order #: 628190

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.3
#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: 06/19/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 06/19/2019

Analytical Report 636324

for
LT Environmental, Inc.

Project Manager: Dan Moir

Mis Amigos 907H

012919108

12-SEP-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

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

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

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



12-SEP-19

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

Reference: XENCO Report No(s): **636324**
Mis Amigos 907H
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 636324. 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. 636324 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

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 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	09-05-19 09:17	1 ft	636324-001
PH01A	S	09-05-19 09:22	4 ft	636324-002
PH02	S	09-05-19 09:45	1 ft	636324-003
PH02A	S	09-05-19 09:50	4 ft	636324-004
PH03	S	09-05-19 10:11	1 ft	636324-005
PH03A	S	09-05-19 10:15	4 ft	636324-006
PH04	S	09-05-19 10:30	1 ft	636324-007
PH04A	S	09-05-19 10:40	4 ft	636324-008
PH05	S	09-05-19 10:51	1 ft	636324-009
PH05A	S	09-05-19 10:57	4 ft	636324-010
PH06	S	09-05-19 12:12	1 ft	636324-011
PH06A	S	09-05-19 12:20	4 ft	636324-012
PH07	S	09-05-19 12:36	1 ft	636324-013
PH07A	S	09-05-19 12:48	4 ft	636324-014



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Mis Amigos 907H*

Project ID: 012919108
Work Order Number(s): 636324

Report Date: 12-SEP-19
Date Received: 09/09/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101038 BTEX by EPA 8021B

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

Samples affected are: 636292-021 S, 636292-021 SD.

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



Certificate of Analysis Summary 636324

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H

Project Id: 012919108

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Sep-09-19 09:00 am

Report Date: 12-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636324-001	636324-002	636324-003	636324-004	636324-005	636324-006
	Field Id:	PH01	PH01A	PH02	PH02A	PH03	PH03A
	Depth:	1- ft	4- ft	1- ft	4- ft	1- ft	4- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-05-19 09:17	Sep-05-19 09:22	Sep-05-19 09:45	Sep-05-19 09:50	Sep-05-19 10:11	Sep-05-19 10:15
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00
	Analyzed:	Sep-11-19 01:46	Sep-11-19 02:06	Sep-11-19 02:26	Sep-11-19 02:47	Sep-11-19 04:05	Sep-11-19 04:25
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398	<0.00400 0.00400	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05
	Analyzed:	Sep-11-19 16:04	Sep-11-19 16:10	Sep-11-19 16:29	Sep-11-19 16:41	Sep-11-19 17:00	Sep-11-19 17:07
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.6 4.95	12.4 5.02	5.34 4.97	<5.04 5.04	<4.99 4.99	7.22 4.95
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30
	Analyzed:	Sep-11-19 01:08	Sep-11-19 01:27	Sep-11-19 01:47	Sep-11-19 02:06	Sep-11-19 02:45	Sep-11-19 03:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9
Diesel Range Organics (DRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9
Motor Oil Range Hydrocarbons (MRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9
Total GRO-DRO		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9
Total TPH		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 636324

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H

Project Id: 012919108

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Sep-09-19 09:00 am

Report Date: 12-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636324-007	636324-008	636324-009	636324-010	636324-011	636324-012
	Field Id:	PH04	PH04A	PH05	PH05A	PH06	PH06A
	Depth:	1- ft	4- ft	1- ft	4- ft	1- ft	4- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-05-19 10:30	Sep-05-19 10:40	Sep-05-19 10:51	Sep-05-19 10:57	Sep-05-19 12:12	Sep-05-19 12:20
BTEx by EPA 8021B SUB: T104704400-18-16	Extracted:	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00	Sep-10-19 11:00
	Analyzed:	Sep-11-19 04:45	Sep-11-19 05:05	Sep-11-19 05:25	Sep-11-19 05:46	Sep-11-19 06:06	Sep-11-19 06:26
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00397 0.00397	<0.00400 0.00400	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total BTEx		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 11:05	Sep-11-19 14:40
	Analyzed:	Sep-11-19 17:13	Sep-11-19 17:19	Sep-11-19 17:26	Sep-11-19 17:32	Sep-11-19 17:38	Sep-11-19 16:40
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.03 5.03	<5.00 5.00	<5.00 5.00	<5.00 5.00	6.68 5.02	20.6 5.04
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30	Sep-10-19 11:30
	Analyzed:	Sep-11-19 03:24	Sep-11-19 03:43	Sep-11-19 04:03	Sep-11-19 04:22	Sep-11-19 04:42	Sep-11-19 05:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9	<25.0 25.0
Diesel Range Organics (DRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9	<25.0 25.0
Motor Oil Range Hydrocarbons (MRO)		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9	<25.0 25.0
Total GRO-DRO		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9	<25.0 25.0
Total TPH		<24.9 24.9	<25.0 25.0	<25.0 25.0	<25.0 25.0	<24.9 24.9	<25.0 25.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 636324

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H

Project Id: 012919108

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Sep-09-19 09:00 am

Report Date: 12-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636324-013	636324-014				
	Field Id:	PH07	PH07A				
	Depth:	1- ft	4- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Sep-05-19 12:36	Sep-05-19 12:48				
BTEX by EPA 8021B SUB: T104704400-18-16	Extracted:	Sep-10-19 11:00	Sep-10-19 11:00				
	Analyzed:	Sep-11-19 06:46	Sep-11-19 07:06				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00199 0.00199	<0.00198 0.00198				
Toluene		<0.00199 0.00199	<0.00198 0.00198				
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198				
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397				
o-Xylene		<0.00199 0.00199	<0.00198 0.00198				
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198				
Total BTEX		<0.00199 0.00199	<0.00198 0.00198				
Chloride by EPA 300 SUB: T104704400-18-16	Extracted:	Sep-11-19 14:40	Sep-11-19 16:10				
	Analyzed:	Sep-11-19 18:32	Sep-11-19 18:16				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		12.7 5.00	<5.00 5.00				
TPH by SW8015 Mod SUB: T104704400-18-16	Extracted:	Sep-10-19 11:30	Sep-10-19 11:30				
	Analyzed:	Sep-11-19 05:21	Sep-11-19 05:41				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<24.9 24.9	<25.0 25.0				
Diesel Range Organics (DRO)		<24.9 24.9	<25.0 25.0				
Motor Oil Range Hydrocarbons (MRO)		<24.9 24.9	<25.0 25.0				
Total GRO-DRO		<24.9 24.9	<25.0 25.0				
Total TPH		<24.9 24.9	<25.0 25.0				

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH01**
Lab Sample Id: 636324-001

Matrix: Soil
Date Collected: 09.05.19 09.17

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.6	4.95	mg/kg	09.11.19 16.04		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 01.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 01.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 01.08	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 01.08	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 01.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	09.11.19 01.08	
o-Terphenyl	84-15-1	107	%	70-135	09.11.19 01.08	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH01**
Lab Sample Id: 636324-001

Matrix: Soil
Date Collected: 09.05.19 09.17

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 01.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 01.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	09.11.19 01.46		
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.11.19 01.46		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH01A**
Lab Sample Id: 636324-002

Matrix: Soil
Date Collected: 09.05.19 09.22

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.4	5.02	mg/kg	09.11.19 16.10		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 01.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 01.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 01.27	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 01.27	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 01.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.11.19 01.27	
o-Terphenyl	84-15-1	93	%	70-135	09.11.19 01.27	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH01A**
Lab Sample Id: 636324-002

Matrix: Soil
Date Collected: 09.05.19 09.22

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 02.06	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 02.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.11.19 02.06		
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.11.19 02.06		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH02**
Lab Sample Id: 636324-003

Matrix: Soil
Date Collected: 09.05.19 09.45

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.34	4.97	mg/kg	09.11.19 16.29		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 01.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 01.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 01.47	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 01.47	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 01.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	09.11.19 01.47	
o-Terphenyl	84-15-1	103	%	70-135	09.11.19 01.47	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH02**
Lab Sample Id: 636324-003

Matrix: Soil
Date Collected: 09.05.19 09.45

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 02.26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 02.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.11.19 02.26		
4-Bromofluorobenzene	460-00-4	115	%	70-130	09.11.19 02.26		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH02A**
Lab Sample Id: 636324-004

Matrix: Soil
Date Collected: 09.05.19 09.50

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	09.11.19 16.41	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 02.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 02.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 02.06	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 02.06	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 02.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	09.11.19 02.06	
o-Terphenyl	84-15-1	92	%	70-135	09.11.19 02.06	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH02A**
Lab Sample Id: 636324-004

Matrix: Soil
Date Collected: 09.05.19 09.50

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.11.19 02.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.11.19 02.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	09.11.19 02.47		
4-Bromofluorobenzene	460-00-4	129	%	70-130	09.11.19 02.47		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH03**
Lab Sample Id: 636324-005

Matrix: Soil
Date Collected: 09.05.19 10.11

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	09.11.19 17.00	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 02.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 02.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 02.45	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 02.45	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 02.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	09.11.19 02.45	
o-Terphenyl	84-15-1	91	%	70-135	09.11.19 02.45	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH03**
Lab Sample Id: 636324-005

Matrix: Soil
Date Collected: 09.05.19 10.11

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.11.19 04.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.11.19 04.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.11.19 04.05		
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.11.19 04.05		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH03A**
Lab Sample Id: 636324-006

Matrix: Soil
Date Collected: 09.05.19 10.15

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.22	4.95	mg/kg	09.11.19 17.07		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 03.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 03.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 03.05	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 03.05	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 03.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.11.19 03.05	
o-Terphenyl	84-15-1	98	%	70-135	09.11.19 03.05	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH03A**
Lab Sample Id: 636324-006

Matrix: Soil
Date Collected: 09.05.19 10.15

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 04.25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 04.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.11.19 04.25		
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.11.19 04.25		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH04**
Lab Sample Id: 636324-007

Matrix: Soil
Date Collected: 09.05.19 10.30

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	09.11.19 17.13	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 03.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 03.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 03.24	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 03.24	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 03.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.11.19 03.24	
o-Terphenyl	84-15-1	98	%	70-135	09.11.19 03.24	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH04**
Lab Sample Id: 636324-007

Matrix: Soil
Date Collected: 09.05.19 10.30

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.11.19 04.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.11.19 04.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	09.11.19 04.45		
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.11.19 04.45		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH04A**
Lab Sample Id: 636324-008

Matrix: Soil
Date Collected: 09.05.19 10.40

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	09.11.19 17.19	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 03.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 03.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 03.43	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 03.43	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 03.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	09.11.19 03.43	
o-Terphenyl	84-15-1	101	%	70-135	09.11.19 03.43	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH04A**
Lab Sample Id: 636324-008

Matrix: Soil
Date Collected: 09.05.19 10.40

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 05.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 05.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.11.19 05.05		
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.11.19 05.05		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH05**
Lab Sample Id: 636324-009

Matrix: Soil
Date Collected: 09.05.19 10.51

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	09.11.19 17.26	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 04.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 04.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 04.03	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 04.03	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 04.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	09.11.19 04.03	
o-Terphenyl	84-15-1	103	%	70-135	09.11.19 04.03	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH05**
Lab Sample Id: 636324-009

Matrix: Soil
Date Collected: 09.05.19 10.51

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.11.19 05.25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.11.19 05.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.11.19 05.25		
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.11.19 05.25		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH05A**
Lab Sample Id: 636324-010

Matrix: Soil
Date Collected: 09.05.19 10.57

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	09.11.19 17.32	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 04.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 04.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 04.22	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 04.22	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 04.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.11.19 04.22	
o-Terphenyl	84-15-1	98	%	70-135	09.11.19 04.22	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH05A**
Lab Sample Id: 636324-010

Matrix: Soil
Date Collected: 09.05.19 10.57

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.11.19 05.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.11.19 05.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.11.19 05.46		
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.11.19 05.46		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH06**
Lab Sample Id: 636324-011

Matrix: Soil
Date Collected: 09.05.19 12.12

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101189

Date Prep: 09.11.19 11.05

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.68	5.02	mg/kg	09.11.19 17.38		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 04.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 04.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 04.42	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 04.42	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 04.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	09.11.19 04.42	
o-Terphenyl	84-15-1	104	%	70-135	09.11.19 04.42	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH06**
Lab Sample Id: 636324-011

Matrix: Soil
Date Collected: 09.05.19 12.12

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.11.19 06.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.11.19 06.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.11.19 06.06		
1,4-Difluorobenzene	540-36-3	80	%	70-130	09.11.19 06.06		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH06A**
Lab Sample Id: 636324-012

Matrix: Soil
Date Collected: 09.05.19 12.20

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101193

Date Prep: 09.11.19 14.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.6	5.04	mg/kg	09.11.19 16.40		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 05.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 05.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 05.01	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 05.01	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 05.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.11.19 05.01	
o-Terphenyl	84-15-1	91	%	70-135	09.11.19 05.01	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH06A**
Lab Sample Id: 636324-012

Matrix: Soil
Date Collected: 09.05.19 12.20

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.11.19 06.26	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.11.19 06.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.11.19 06.26		
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.11.19 06.26		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH07**
Lab Sample Id: 636324-013

Matrix: Soil
Date Collected: 09.05.19 12.36

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101193

Date Prep: 09.11.19 14.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.7	5.00	mg/kg	09.11.19 18.32		1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 05.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 05.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 05.21	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 05.21	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 05.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.11.19 05.21	
o-Terphenyl	84-15-1	87	%	70-135	09.11.19 05.21	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH07**
Lab Sample Id: 636324-013

Matrix: Soil
Date Collected: 09.05.19 12.36

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.11.19 06.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.11.19 06.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.11.19 06.46		
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.11.19 06.46		



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH07A**
Lab Sample Id: 636324-014

Matrix: Soil
Date Collected: 09.05.19 12.48

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3101194

Date Prep: 09.11.19 16.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	09.11.19 18.16	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101058

Date Prep: 09.10.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	09.11.19 05.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	09.11.19 05.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	09.11.19 05.41	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	09.11.19 05.41	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	09.11.19 05.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	09.11.19 05.41	
o-Terphenyl	84-15-1	108	%	70-135	09.11.19 05.41	



Certificate of Analytical Results 636324

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **PH07A**
Lab Sample Id: 636324-014

Matrix: Soil
Date Collected: 09.05.19 12.48

Date Received: 09.09.19 09.00
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101038

Prep Method: SW5030B

% Moisture:

Date Prep: 09.10.19 11.00

Basis: Wet Weight

SUB: T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.11.19 07.06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.11.19 07.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.11.19 07.06		
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.11.19 07.06		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 636324

LT Environmental, Inc. Mis Amigos 907H

Analytical Method: Chloride by EPA 300

Seq Number: 3101189

MB Sample Id: 7685968-1-BLK

Matrix: Solid

LCS Sample Id: 7685968-1-BKS

Prep Method: E300P

Date Prep: 09.11.19

LCSD Sample Id: 7685968-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	253	101	90-110	0	20	mg/kg	09.11.19 14:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3101193

MB Sample Id: 7685982-1-BLK

Matrix: Solid

LCS Sample Id: 7685982-1-BKS

Prep Method: E300P

Date Prep: 09.11.19

LCSD Sample Id: 7685982-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	266	106	266	106	90-110	0	20	mg/kg	09.11.19 16:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3101194

MB Sample Id: 7685997-1-BLK

Matrix: Solid

LCS Sample Id: 7685997-1-BKS

Prep Method: E300P

Date Prep: 09.11.19

LCSD Sample Id: 7685997-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	253	101	90-110	0	20	mg/kg	09.11.19 18:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3101189

Parent Sample Id: 636321-011

Matrix: Soil

MS Sample Id: 636321-011 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636321-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.60	248	254	99	254	99	90-110	0	20	mg/kg	09.11.19 14:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3101189

Parent Sample Id: 636324-002

Matrix: Soil

MS Sample Id: 636324-002 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636324-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.4	251	270	103	271	103	90-110	0	20	mg/kg	09.11.19 16:17	

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

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

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 636324

LT Environmental, Inc. Mis Amigos 907H

Analytical Method: Chloride by EPA 300

Seq Number: 3101193

Parent Sample Id: 636324-012

Matrix: Soil

MS Sample Id: 636324-012 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636324-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.6	252	294	108	289	107	90-110	2	20	mg/kg	09.11.19 16:47	

Analytical Method: Chloride by EPA 300

Seq Number: 3101193

Parent Sample Id: 636324-013

Matrix: Soil

MS Sample Id: 636324-013 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636324-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.7	250	283	108	278	106	90-110	2	20	mg/kg	09.11.19 18:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3101194

Parent Sample Id: 636324-014

Matrix: Soil

MS Sample Id: 636324-014 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636324-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.95	250	247	97	246	97	90-110	0	20	mg/kg	09.11.19 18:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3101194

Parent Sample Id: 636326-010

Matrix: Soil

MS Sample Id: 636326-010 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636326-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	123	248	366	98	365	98	90-110	0	20	mg/kg	09.11.19 19:51	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101058

MB Sample Id: 7685872-1-BLK

Matrix: Solid

LCS Sample Id: 7685872-1-BKS

Prep Method: SW8015P

Date Prep: 09.10.19

LCSD Sample Id: 7685872-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1040	104	1070	107	70-135	3	20	mg/kg	09.10.19 21:55	
Diesel Range Organics (DRO)	<25.0	1000	977	98	1010	101	70-135	3	20	mg/kg	09.10.19 21:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		115		116		70-135	%	09.10.19 21:55
o-Terphenyl	96		105		109		70-135	%	09.10.19 21:55

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 636324

LT Environmental, Inc. Mis Amigos 907H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101058

Parent Sample Id: 636292-021

Matrix: Soil

MS Sample Id: 636292-021 S

Prep Method: SW8015P

Date Prep: 09.10.19

MSD Sample Id: 636292-021 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)	17.5	996	1020	101	1050	103	70-135	3	20	mg/kg	09.10.19 22:53	
Diesel Range Organics (DRO)	1050	996	1260	21	1300	25	70-135	3	20	mg/kg	09.10.19 22:53	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		118		70-135	%	09.10.19 22:53
o-Terphenyl	107		115		70-135	%	09.10.19 22:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101038

MB Sample Id: 7685874-1-BLK

Matrix: Solid

LCS Sample Id: 7685874-1-BKS

Prep Method: SW5030B

Date Prep: 09.10.19

LCSD Sample Id: 7685874-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0843	84	0.0910	91	70-130	8	35	mg/kg	09.10.19 09:40	
Toluene	<0.00200	0.100	0.0923	92	0.0972	97	70-130	5	35	mg/kg	09.10.19 09:40	
Ethylbenzene	<0.00200	0.100	0.102	102	0.107	107	70-130	5	35	mg/kg	09.10.19 09:40	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.211	106	70-130	5	35	mg/kg	09.10.19 09:40	
o-Xylene	<0.00200	0.100	0.104	104	0.109	109	70-130	5	35	mg/kg	09.10.19 09:40	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		93		95		70-130	%	09.10.19 09:40
4-Bromofluorobenzene	96		116		115		70-130	%	09.10.19 09:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101038

Parent Sample Id: 636292-021

Matrix: Soil

MS Sample Id: 636292-021 S

Prep Method: SW5030B

Date Prep: 09.10.19

MSD Sample Id: 636292-021 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	0.0366	36	0.0262	26	70-130	33	35	mg/kg	09.10.19 22:26	X
Toluene	<0.00202	0.101	0.0285	28	0.0319	32	70-130	11	35	mg/kg	09.10.19 22:26	X
Ethylbenzene	<0.00202	0.101	0.0155	15	0.0209	21	70-130	30	35	mg/kg	09.10.19 22:26	X
m,p-Xylenes	<0.00403	0.202	0.0270	13	0.0339	17	70-130	23	35	mg/kg	09.10.19 22:26	X
o-Xylene	<0.00202	0.101	0.0165	16	0.0223	22	70-130	30	35	mg/kg	09.10.19 22:26	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		78		70-130	%	09.10.19 22:26
4-Bromofluorobenzene	133	**	139	**	70-130	%	09.10.19 22:26

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

Final 1.000



Chain of Custody

Work Order No: 036324

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

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com
Project Name:	Mis Amigos 907H	Turn Around	☒ Routine ☐ Rush
Project Number:	012919108	Rush:	
P.O. Number:	IRP-5568	Due Date:	
Sampler's Name:	Fatima Smith		

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (mg/l)	BTEX (mg/l)	Chloride (mg/l)												Sample Comments
PHO6	S	09/05/19	12:12	1'	1	X	X	X												
PHO6A	S		12:20	4'	1	X	X	X												
PHO7	S		12:36	1'	1	X	X	X												
PHO7A	S		12:48	4'	1	X	X	X												
fat																				

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb 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			
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)
<i>fat</i>	<i>fat</i>	09/05/19 9:00	<i>fat</i>
3			
5			

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.

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

Sample Comments



Inter-Office Shipment

Page 1 of 2

IOS Number **47650**

Date/Time: 09/09/19 11:57

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636324-001	S	PH01	09/05/19 09:17	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-001	S	PH01	09/05/19 09:17	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-001	S	PH01	09/05/19 09:17	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-002	S	PH01A	09/05/19 09:22	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-002	S	PH01A	09/05/19 09:22	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-002	S	PH01A	09/05/19 09:22	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-003	S	PH02	09/05/19 09:45	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-003	S	PH02	09/05/19 09:45	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-003	S	PH02	09/05/19 09:45	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-004	S	PH02A	09/05/19 09:50	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-004	S	PH02A	09/05/19 09:50	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-004	S	PH02A	09/05/19 09:50	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-005	S	PH03	09/05/19 10:11	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-005	S	PH03	09/05/19 10:11	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-005	S	PH03	09/05/19 10:11	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-006	S	PH03A	09/05/19 10:15	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-006	S	PH03A	09/05/19 10:15	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-006	S	PH03A	09/05/19 10:15	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-007	S	PH04	09/05/19 10:30	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-007	S	PH04	09/05/19 10:30	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-007	S	PH04	09/05/19 10:30	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-008	S	PH04A	09/05/19 10:40	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-008	S	PH04A	09/05/19 10:40	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-008	S	PH04A	09/05/19 10:40	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-009	S	PH05	09/05/19 10:51	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

Page 2 of 2

IOS Number **47650**

Date/Time: 09/09/19 11:57

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
636324-009	S	PH05	09/05/19 10:51	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-009	S	PH05	09/05/19 10:51	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-010	S	PH05A	09/05/19 10:57	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-010	S	PH05A	09/05/19 10:57	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-010	S	PH05A	09/05/19 10:57	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-011	S	PH06	09/05/19 12:12	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-011	S	PH06	09/05/19 12:12	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-011	S	PH06	09/05/19 12:12	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-012	S	PH06A	09/05/19 12:20	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-012	S	PH06A	09/05/19 12:20	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-012	S	PH06A	09/05/19 12:20	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-013	S	PH07	09/05/19 12:36	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-013	S	PH07	09/05/19 12:36	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-013	S	PH07	09/05/19 12:36	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	
636324-014	S	PH07A	09/05/19 12:48	E300_CL	Chloride by EPA 300	09/13/19	03/03/20	JKR	CL	
636324-014	S	PH07A	09/05/19 12:48	SW8021B	BTEX by EPA 8021B	09/13/19	09/19/19	JKR	BR4FBZ BZ BZME EBZ X	
636324-014	S	PH07A	09/05/19 12:48	SW8015MOD_NM	TPH by SW8015 Mod	09/13/19	09/19/19	JKR	GRO-DRO PHCC10C28 PF	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 09/09/2019

Received By:

Brianna Teel

Date Received: 09/10/2019 10:52

Cooler Temperature: 0.6



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 47650

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 09/09/2019 11:57 AM

Received By: Brianna Teel

Date Received: 09/10/2019 10:52 AM

Sample Receipt Checklist

Comments

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Brianna Teel

Date: 09/10/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/09/2019 09:00:00 AM

Work Order #: 636324

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6*Custody Seals Signed and dated?	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
#18 Water VOC samples have zero headspace?	N/A

Subbed to Xenco Midland.

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 09/09/2019

Checklist reviewed by:


Jessica Kramer

Date: 09/09/2019

Analytical Report 636315

for
LT Environmental, Inc.

Project Manager: Dan Moir

Mis Amigos 907H

012919108

11-SEP-19

Collected By: Client



1089 N Canal Street
Carlsbad, NM 88220

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

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

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



11-SEP-19

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

Reference: XENCO Report No(s): **636315**
Mis Amigos 907H
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 636315. 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. 636315 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,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

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 636315

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	09-05-19 13:04	1 ft	636315-001



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Mis Amigos 907H*

Project ID: 012919108
Work Order Number(s): 636315

Report Date: 11-SEP-19
Date Received: 09/09/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100983 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 636303-003 SD.

Batch: LBA-3100998 BTEX by EPA 8021B

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



Certificate of Analysis Summary 636315

LT Environmental, Inc., Arvada, CO

Project Name: Mis Amigos 907H

Project Id: 012919108

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Sep-09-19 09:00 am

Report Date: 11-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636315-001					
	Field Id:	FS01					
	Depth:	1- ft					
	Matrix:	SOIL					
	Sampled:	Sep-05-19 13:04					
BTEX by EPA 8021B	Extracted:	Sep-09-19 15:00					
	Analyzed:	Sep-09-19 23:41					
	Units/RL:	mg/kg RL					
Benzene		<0.00101 0.00101					
Toluene		<0.00101 0.00101					
Ethylbenzene		<0.00101 0.00101					
m,p-Xylenes		<0.00202 0.00202					
o-Xylene		<0.00101 0.00101					
Total Xylenes		<0.00101 0.00101					
Total BTEX		<0.00101 0.00101					
Chloride by EPA 300	Extracted:	Sep-09-19 11:09					
	Analyzed:	Sep-09-19 16:49					
	Units/RL:	mg/kg RL					
Chloride		16.0 9.90					
TPH by SW8015 Mod	Extracted:	Sep-09-19 11:30					
	Analyzed:	Sep-09-19 22:13					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<24.9 24.9					
Diesel Range Organics (DRO)		<24.9 24.9					
Motor Oil Range Hydrocarbons (MRO)		<24.9 24.9					
Total GRO-DRO		<24.9 24.9					
Total TPH		<24.9 24.9					

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
Project Assistant



Certificate of Analytical Results 636315

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **FS01**
Lab Sample Id: 636315-001

Matrix: Soil
Date Collected: 09.05.19 13.04

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3100922

Date Prep: 09.09.19 11.09

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.0	9.90	mg/kg	09.09.19 16.49		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3100983

Date Prep: 09.09.19 11.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.09.19 22.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.09.19 22.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.09.19 22.13	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.09.19 22.13	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.09.19 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.09.19 22.13	
o-Terphenyl	84-15-1	91	%	70-135	09.09.19 22.13	



Certificate of Analytical Results 636315

LT Environmental, Inc., Arvada, CO

Mis Amigos 907H

Sample Id: **FS01**
Lab Sample Id: 636315-001

Matrix: Soil
Date Collected: 09.05.19 13.04

Date Received: 09.09.19 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: DTH

Analyst: DTH

Seq Number: 3100998

Date Prep: 09.09.19 15.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.09.19 23.41	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.09.19 23.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.09.19 23.41		
4-Bromofluorobenzene	460-00-4	109	%	70-130	09.09.19 23.41		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

MQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 636315

LT Environmental, Inc. Mis Amigos 907H

Analytical Method: Chloride by EPA 300

Seq Number: 3100922

MB Sample Id: 7685788-1-BLK

Matrix: Solid

LCS Sample Id: 7685788-1-BKS

Prep Method: E300P

Date Prep: 09.09.19

LCSD Sample Id: 7685788-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	274	110	271	108	80-120	1	20	mg/kg	09.09.19 16:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3100922

Parent Sample Id: 636303-001

Matrix: Soil

MS Sample Id: 636303-001 S

Prep Method: E300P

Date Prep: 09.09.19

MSD Sample Id: 636303-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	677	4010	5240	114	5250	114	80-120	0	20	mg/kg	09.09.19 16:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3100922

Parent Sample Id: 636359-010

Matrix: Solid

MS Sample Id: 636359-010 S

Prep Method: E300P

Date Prep: 09.09.19

MSD Sample Id: 636359-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	192	9880	11100	110	11100	109	80-120	0	20	mg/kg	09.09.19 18:54	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3100983

MB Sample Id: 7685902-1-BLK

Matrix: Solid

LCS Sample Id: 7685902-1-BKS

Prep Method: SW8015P

Date Prep: 09.09.19

LCSD Sample Id: 7685902-1-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)	<9.88	1000	965	97	948	95	70-135	2	35	mg/kg	09.09.19 20:30	
Diesel Range Organics (DRO)	<9.88	1000	898	90	906	91	70-135	1	35	mg/kg	09.09.19 20:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		130		131		70-135	%	09.09.19 20:30
o-Terphenyl	97		121		118		70-135	%	09.09.19 20:30

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 636315

LT Environmental, Inc.

Mis Amigos 907H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3100983

Parent Sample Id: 636303-003

Matrix: Soil

MS Sample Id: 636303-003 S

Prep Method: SW8015P

Date Prep: 09.09.19

MSD Sample Id: 636303-003 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)	<25.1	1000	942	94	915	92	70-135	3	35	mg/kg	09.09.19 21:32	
Diesel Range Organics (DRO)	<25.1	1000	883	88	855	86	70-135	3	35	mg/kg	09.09.19 21:32	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		142	**	70-135	%	09.09.19 21:32
o-Terphenyl	109		122		70-135	%	09.09.19 21:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3100998

MB Sample Id: 7685906-1-BLK

Matrix: Solid

LCS Sample Id: 7685906-1-BKS

Prep Method: SW5030B

Date Prep: 09.09.19

LCSD Sample Id: 7685906-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0882	88	0.0869	87	70-130	1	35	mg/kg	09.09.19 21:24	
Toluene	<0.00100	0.100	0.0908	91	0.0877	88	70-130	3	35	mg/kg	09.09.19 21:24	
Ethylbenzene	<0.00100	0.100	0.112	112	0.107	107	71-129	5	35	mg/kg	09.09.19 21:24	
m,p-Xylenes	<0.00200	0.200	0.226	113	0.222	111	70-135	2	35	mg/kg	09.09.19 21:24	
o-Xylene	<0.00100	0.100	0.113	113	0.112	112	71-133	1	35	mg/kg	09.09.19 21:24	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		104		95		70-130	%	09.09.19 21:24
4-Bromofluorobenzene	102		124		118		70-130	%	09.09.19 21:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3100998

Parent Sample Id: 636303-003

Matrix: Soil

MS Sample Id: 636303-003 S

Prep Method: SW5030B

Date Prep: 09.09.19

MSD Sample Id: 636303-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0852	85	0.0869	86	70-130	2	35	mg/kg	09.09.19 22:43	
Toluene	<0.00100	0.100	0.0836	84	0.0797	79	70-130	5	35	mg/kg	09.09.19 22:43	
Ethylbenzene	<0.00100	0.100	0.0996	100	0.0953	94	71-129	4	35	mg/kg	09.09.19 22:43	
m,p-Xylenes	<0.00201	0.201	0.206	102	0.196	98	70-135	5	35	mg/kg	09.09.19 22:43	
o-Xylene	<0.00100	0.100	0.105	105	0.101	100	71-133	4	35	mg/kg	09.09.19 22:43	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		110		70-130	%	09.09.19 22:43
4-Bromofluorobenzene	129		128		70-130	%	09.09.19 22:43

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

Page 1 of 1

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

Revised Date 051418 Rev. 2018.



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/09/2019 09:00:00 AM

Work Order #: 636315

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:


Elizabeth McClellan

Date: 09/09/2019

Checklist reviewed by:


Jessica Kramer

Date: 09/09/2019