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	NRM1931848817
District RP	2RP-5693
Facility ID	fAB1630929137
Application ID	pRM1931848348

Release Notification

SE2VM-191010-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)*
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.295912 Longitude -103.918622
(NAD 83 in decimal degrees to 5 decimal places)

Site Name NASH UNIT 302H-402H	Site Type Well Site
Date Release Discovered 10/01/2019	API# *(if applicable)* 30-015-45501 (NASH UNIT #302H)

Unit Letter	Section	Township	Range	County
B	19	23S	30E	EDDY

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☒ Other (describe)	Volume/Weight Released (provide units) Frac Fluid 5.0 bbls	Volume/Weight Recovered (provide units) Frac Fluid 4.0 bbls

Cause of Release: While pumping frac stage on the well site, a coupling failed releasing 5.0 bbls. 4.0 bbls were recovered in the impervious lined containment and 1.0 bbl impacted the well pad. Additional third party resources have been retained to assist in the remediation.

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1931848817
District RP	2RP-5693
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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 not been undertaken, explain why:

N/A

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 10/10/2019

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 11/14/2019

State of New Mexico
Oil Conservation Division

Incident ID	NRM1931848817
District RP	2RP-5693
Facility ID	fAB1630929137
Application ID	pRM1931848348

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?	50'-100' (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NRM1931848817
District RP	2RP-5693
Facility ID	fAB1630929137
Application ID	pRM1931848348

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: 05/29/20

email: Kyle_Littrell@xtoenergy.com Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	NRM1931848817
District RP	2RP-5693
Facility ID	fAB1630929137
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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: 05/29/20

email: Kyle_Littrell@xtoenergy.com Telephone: _____

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: _____

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

May 29, 2020

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

RE: Closure Request
Nash Unit 302H-402H
Remediation Permit Numbers 2RP-5693
Incident Number NRM1931848817
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Nash Unit 302H-402H (Site) in Unit B, Section 19, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacted to soil following the release of frac fluid at the Site. Based on visual observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request, and requesting no further action for Incident Number NRM1931848817.

RELEASE BACKGROUND

On October 1, 2019, a coupling failed while pumping frac fluid at the Site, resulting in the release of 5 bbls of frac fluid within lined containment and onto the caliche well pad. Approximately 4 bbls of frac fluid were recovered from within the lined containment; approximately 1 bbl of fluid impacted the caliche well pad. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification Form C-141 (Form C-141) on October 10, 2019 and was assigned Incident Number NRM1931848817.

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 50-100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321742103552601, located approximately 1,798 feet west of the Site. The water well has a depth to groundwater of 66 feet and a total depth of 100 feet. Ground surface elevation at the groundwater well location is 3,034 feet above mean sea level (amsl), which is approximately 43 feet lower in elevation than the Site. There are

four additional wells within a 2-mile radius that indicate regional depth to groundwater is greater than 50 feet bgs. New Mexico Office of the State Engineer (NMOSE) well C-04018, located approximately 1.8 miles east of the Site, was most recently measured and had a reported depth to groundwater of 179 feet bgs.

The closest continuously flowing water or significant watercourse to the Site is an intermittent stream bed located approximately 375 feet northwest 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 high 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;
- Total petroleum hydrocarbons (TPH): 100 mg/kg; and
- Chloride: 600 mg/kg.

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

On October 15, 2019, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. The release extent was mapped utilizing a handheld Global Positing System (GPS) and is depicted on Figure 2. Photographic documentation of the Site was conducted, and the photographic log is included in Attachment 1.

Further site assessment and soil sampling activities were postponed due to ongoing hydraulic fracturing operations near the release, which resulted in Site activity restrictions due to safety concerns. Per 19.15.29.12.B.(1) NMAC, an extension for submission of a Remediation Plan or Closure Request was granted. The extension was requested on December 24, 2019 and approved by the NMOCD District II office, extending the deadline to May 29, 2020.

On May 18 through May 21, 2020, once hydraulic fracturing operations were complete, LTE personnel returned to the Site to oversee site assessment activities. Potholes were advanced via backhoe and stainless-steel hand-auger at three locations within the release extent on the well pad. Potholes PH01 through PH03 were advanced to a depth of 2 feet bgs. Two soil samples were collected from each pothole at depths ranging from 0.5 feet bgs to 2 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated

photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for each sample were documented on a lithologic/soil sampling log and are included as Attachment 2. The potholes were backfilled with the soil removed. The potholes and delineation soil sample locations 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 Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in delineation soil samples PH01/PH01A through PH03/PH03A, collected at depths ranging from 0.5 feet to 2 feet bgs. The laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are provided in Attachment 3.

CLOSURE REQUEST

Delineation soil samples PH01/PH01A through PH03/PH03A were collected from within the release extent, from depths ranging from 0.5 feet to 2 feet bgs, to assess for the presence or absence of soil impacts as a result of the October 1, 2019 frac fluid release at the Site. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples PH01/PH01A through PH03/PH03A. Additionally, field screening of soil indicated volatile aromatic hydrocarbons and chloride concentrations were not elevated and petroleum hydrocarbon odors were not identified within the release extent.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria, no impacted soil was identified, and excavation activities were not warranted. XTO requests NFA for this release event and respectfully requests closure of Incident Number NRM1931848817.

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

A proud member of WSP

Sincerely,

LT ENVIRONMENTAL, INC.

Elizabeth Naka
Staff Environmental Scientist

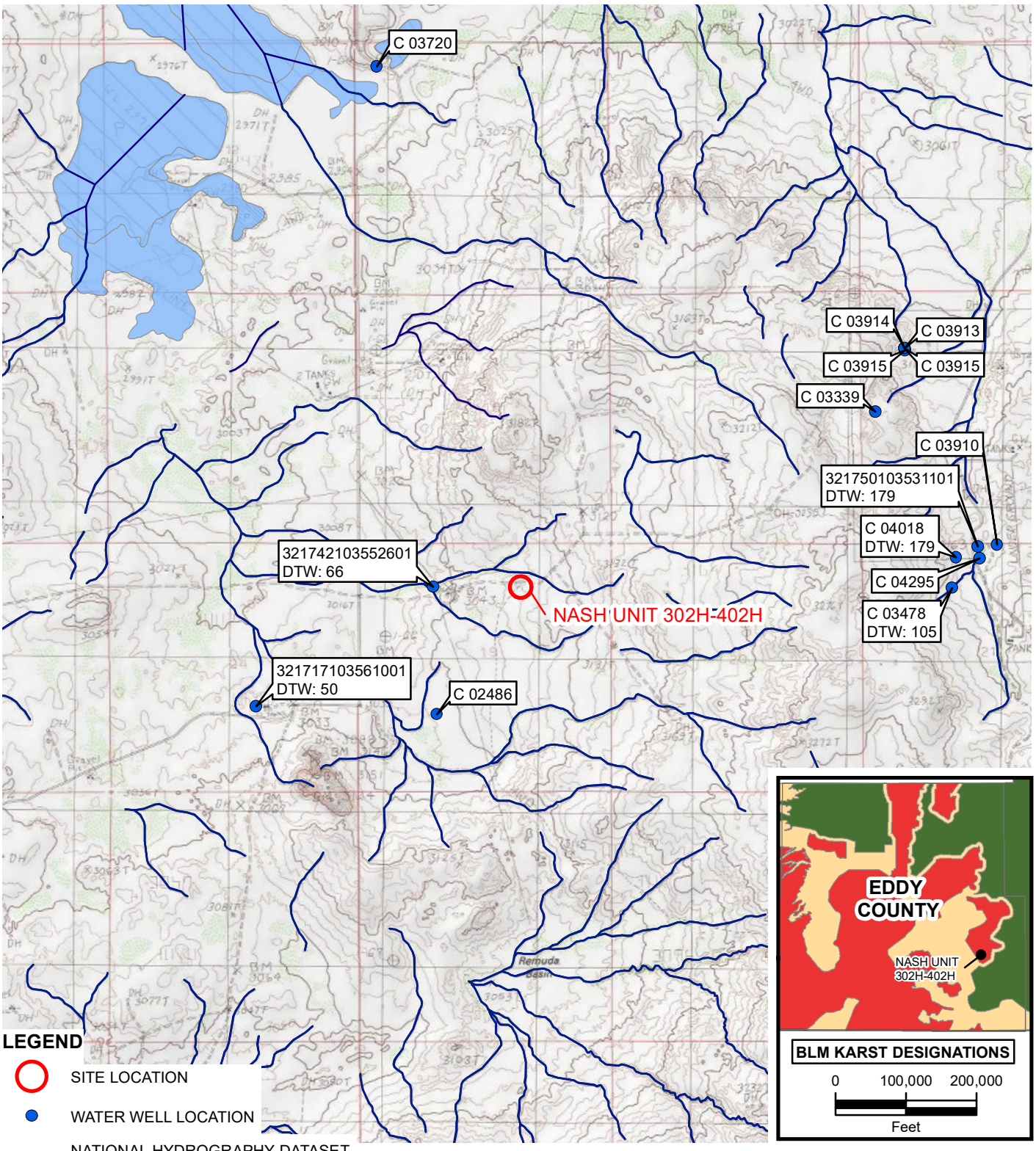
Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Reports
Attachment 1	Photographic Log
Attachment 2	Lithologic/Soil Sample Logs
Attachment 3	Laboratory Analytical Reports

FIGURES



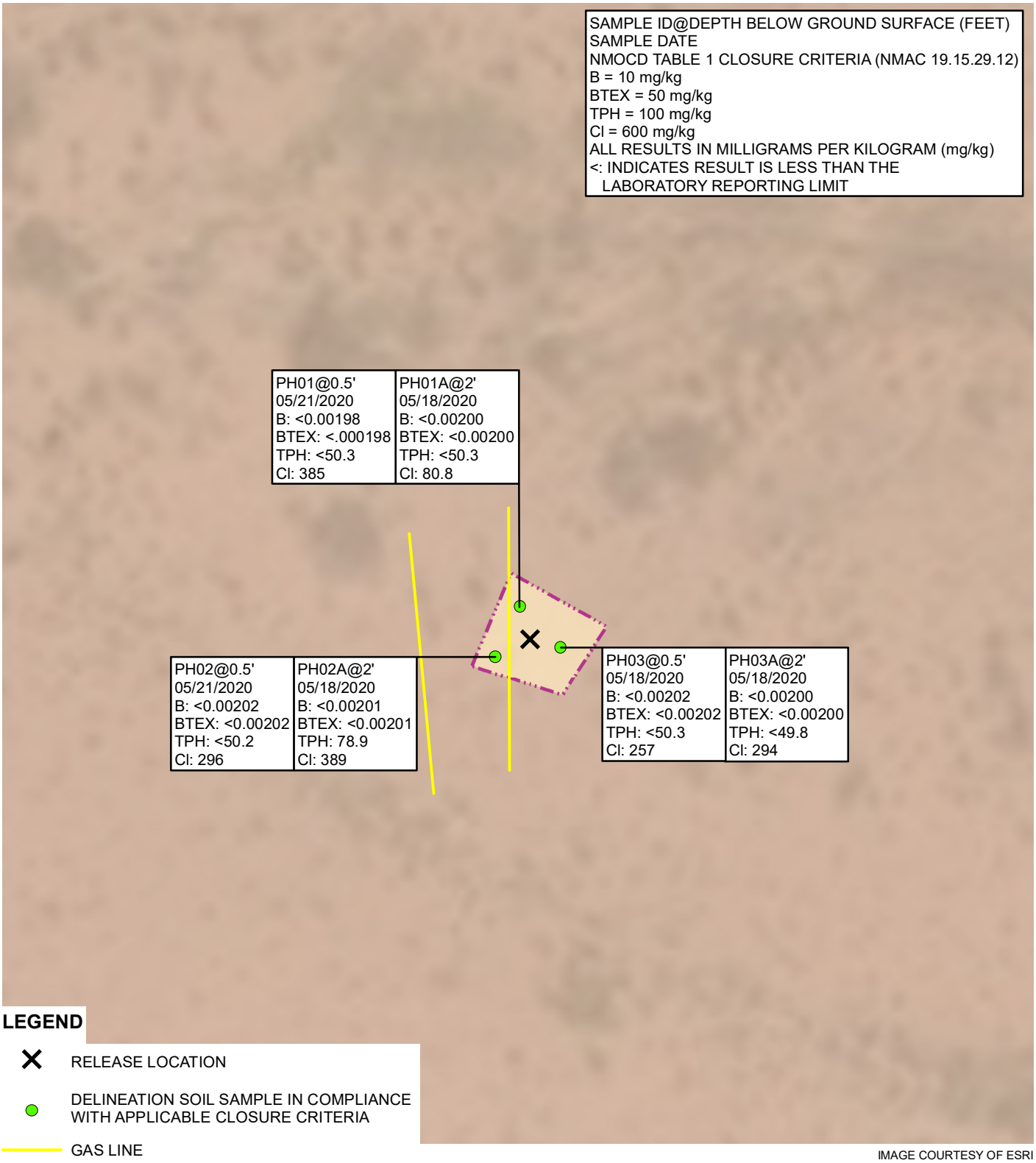
LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

NOTE: INCIDENT NUMBER NRM1931848817
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
NASH UNIT 302H-402H
UNIT B SEC 19 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919254_NASH UNIT 302H-402H\012919254_FIG01_SL_RECEPTOR_2020.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBER NRM1931848817

FIGURE 2
SOIL SAMPLE LOCATIONS
NASH UNIT 302H-402H
UNIT B SEC 19 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919254_NASH UNIT 302H-402H\012919254_FIG02_SS_LOC_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

NASH UNIT 302H-402H
INCIDENT NUMBER NRM1931848817
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**
PH01	0.5	05/21/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	385
PH01A	2	05/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	80.8
PH02	0.5	05/21/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	296
PH02A	2	05/18/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	78.9	<50.2	78.9	78.9	389
PH03	1	05/18/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	257
PH03A	2	05/18/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	294

Notes:

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

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ATTACHMENT 1: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: South facing view of release area amid active equipment.

Photograph 2: View of release area amid active equipment on pad.

Photograph 3: North facing view during site assessment activities.

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLING LOG

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

BH or PH Name: PH01	Date: 5/18/2020 & 05/21/20
Site Name: NASH 302H-402H	
RP or Incident Number:	
LTE Job Number: 012919254	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EM	Method: Backhoe excavation		
Lat/Long: 32.295704, -103.918449	Field Screening: Chloride, PID	Hole Diameter: 2'	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	1,600	11.3	N	PH01	0.5'	0		sand with silt, reddish-tan, medium grained dry, poorly graded, no odor
	235.2	12.0	N	PH01A	2'	2		Silty sand, reddish-tan, poorly graded, med-fine grain, no odor
								Total Depth : 2' bgs

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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BH or PH Name: PH02	Date: 5/18/2020 & 05/21/20
Site Name: NASH 302H-402H	
RP or Incident Number:	
LTE Job Number: 012919254	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EM	Method: Backhoe excavation		
Lat/Long: 32.295704, -103.918449	Field Screening: Chloride, PID	Hole Diameter: 2'	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	650	9.6	N	PH02	0.5	0		Sand with Silt, reddish-tan, medium grained, dry, poorly graded, no odor
	649.6	10.5	N	PH02A	2'	2		Silty sand, reddish-tan, poorly graded, med-fine grain, no odor
								Total Depth : 2' bgs

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

BH or PH Name: PH03	Date: 5/18/2020
Site Name: NASH 302H-402H	
RP or Incident Number:	
LTE Job Number: 012919254	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: EM	Method: Backhoe excavation		
Lat/Long: 32.295704, -103.918449	Field Screening: Chloride, PID	Hole Diameter: 2'	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
	537.2	10.6	N	PH03	1'	1		Silty sand, reddish-tan, poorly graded, med-fine grain, no odor
	436.8	3.6	N	PH03A	2'	2		Silty sand, reddish-tan, poorly graded, med-fine grain, no odor
								Total Depth : 2' bgs
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Certificate of Analysis Summary 661936

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit 302H-402H

Project Id: 012919253
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 05.19.2020 08:15
Report Date: 05.27.2020 15:51
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	661936-001		661936-002		661936-003		661936-004					
	Field Id:	PH01A		PH02A		PH03		PH03A					
	Depth:	2- ft		2- ft		1- ft		2- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	05.18.2020 12:40		05.18.2020 13:02		05.18.2020 14:30		05.18.2020 14:40					
BTEX by EPA 8021B	***Extracted:***	05.19.2020 10:49		05.19.2020 10:49		05.19.2020 10:49		05.19.2020 10:49					
	Analyzed:	05.19.2020 17:53		05.19.2020 18:13		05.19.2020 18:34		05.19.2020 18:54					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00403	0.00403	<0.00400	0.00400				
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	05.19.2020 11:53		05.19.2020 11:53		05.19.2020 11:53		05.19.2020 11:53					
	Analyzed:	05.19.2020 14:11		05.19.2020 14:31		05.19.2020 14:37		05.19.2020 14:57					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		80.8 X	50.0	389	49.9	257	200	294	9.90				
TPH by SW8015 Mod	***Extracted:***	05.19.2020 12:00		05.19.2020 12:00		05.19.2020 12:00		05.19.2020 12:00					
	Analyzed:	05.19.2020 12:59		05.19.2020 13:20		05.19.2020 13:41		05.19.2020 14:01					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.2	50.2	<50.3	50.3	<49.8	49.8				
Diesel Range Organics (DRO)		<50.3	50.3	78.9	50.2	<50.3	50.3	<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.2	50.2	<50.3	50.3	<49.8	49.8				
Total GRO-DRO		<50.3	50.3	78.9	50.2	<50.3	50.3	<49.8	49.8				
Total TPH		<50.3	50.3	78.9	50.2	<50.3	50.3	<49.8	49.8				

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

John Builes
Project Manager

Analytical Report 661936

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Unit 302H-402H

012919253

05.27.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.27.2020

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

Reference: XENCO Report No(s): **661936**
Nash Unit 302H-402H
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) 661936. 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. 661936 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,

John Builes
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01A	S	05.18.2020 12:40	2 ft	661936-001
PH02A	S	05.18.2020 13:02	2 ft	661936-002
PH03	S	05.18.2020 14:30	1 ft	661936-003
PH03A	S	05.18.2020 14:40	2 ft	661936-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Unit 302H-402H

Project ID: *012919253*
Work Order Number(s): *661936*

Report Date: *05.27.2020*
Date Received: *05.19.2020*

Sample receipt non conformances and comments:

Sample ID's renamed per client request 5/27/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3126381 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 661936-004.

Batch: LBA-3126463 Chloride by EPA 300

Lab Sample ID 661936-001 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: 661936-001, -002, -003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-001	Date Collected:	05.18.2020 12:40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 11:53	Basis:	Wet Weight
Seq Number:	3126463				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.8**	50.0	mg/kg	05.19.2020 14:11	X	5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126381				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.19.2020 12:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.19.2020 12:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.19.2020 12:59	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.19.2020 12:59	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.19.2020 12:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	05.19.2020 12:59	
o-Terphenyl	84-15-1	127	%	70-135	05.19.2020 12:59	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-001	Date Collected:	05.18.2020 12:40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 10:49	Basis:	Wet Weight
Seq Number:	3126452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.19.2020 17:53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.19.2020 17:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.19.2020 17:53	
4-Bromofluorobenzene	460-00-4	96	%	70-130	05.19.2020 17:53	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-002	Date Collected:	05.18.2020 13:02	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 11:53	Basis:	Wet Weight
Seq Number:	3126463				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**389**	49.9	mg/kg	05.19.2020 14:31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126381				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.19.2020 13:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	**78.9**	50.2	mg/kg	05.19.2020 13:20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.19.2020 13:20	U	1
Total GRO-DRO	PHC628	**78.9**	50.2	mg/kg	05.19.2020 13:20		1
Total TPH	PHC635	**78.9**	50.2	mg/kg	05.19.2020 13:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	05.19.2020 13:20	
o-Terphenyl	84-15-1	119	%	70-135	05.19.2020 13:20	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-002	Date Collected:	05.18.2020 13:02	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 10:49	Basis:	Wet Weight
Seq Number:	3126452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.19.2020 18:13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.19.2020 18:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	05.19.2020 18:13	
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.19.2020 18:13	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-003	Date Collected:	05.18.2020 14:30	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 11:53	Basis:	Wet Weight
Seq Number:	3126463				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**257**	200	mg/kg	05.19.2020 14:37		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126381				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.19.2020 13:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.19.2020 13:41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.19.2020 13:41	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.19.2020 13:41	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.19.2020 13:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	05.19.2020 13:41	
o-Terphenyl	84-15-1	119	%	70-135	05.19.2020 13:41	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-003	Date Collected:	05.18.2020 14:30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 10:49	Basis:	Wet Weight
Seq Number:	3126452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.19.2020 18:34	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.19.2020 18:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.19.2020 18:34	
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.19.2020 18:34	

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-004	Date Collected:	05.18.2020 14:40	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 11:53	Basis:	Wet Weight
Seq Number:	3126463				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**294**	9.90	mg/kg	05.19.2020 14:57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.19.2020 12:00	Basis:	Wet Weight
Seq Number:	3126381				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.19.2020 14:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	05.19.2020 14:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	05.19.2020 14:01	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	05.19.2020 14:01	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	05.19.2020 14:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	05.19.2020 14:01	
o-Terphenyl	84-15-1	137	%	70-135	05.19.2020 14:01	**

Certificate of Analytical Results 661936

LT Environmental, Inc., Arvada, CO

Nash Unit 302H-402H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	05.19.2020 08:15
Lab Sample Id:	661936-004	Date Collected:	05.18.2020 14:40	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.19.2020 10:49	Basis:	Wet Weight
Seq Number:	3126452				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.19.2020 18:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.19.2020 18:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.19.2020 18:54	
1,4-Difluorobenzene	540-36-3	104	%	70-130	05.19.2020 18:54	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 661936

LT Environmental, Inc.

Nash Unit 302H-402H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126463 — Matrix: Solid — Date Prep: 05.19.2020
MB Sample Id: 7703647-1-BLK — LCS Sample Id: 7703647-1-BKS — LCSD Sample Id: 7703647-1-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	251	100	249	100	90-110	1	20	mg/kg	05.19.2020 12:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126463 — Matrix: Soil — Date Prep: 05.19.2020
Parent Sample Id: 661935-001 — MS Sample Id: 661935-001 S — MSD Sample Id: 661935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	95.1	199	279	92	281	93	90-110	1	20	mg/kg	05.19.2020 12:48	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126463 — Matrix: Soil — Date Prep: 05.19.2020
Parent Sample Id: 661936-001 — MS Sample Id: 661936-001 S — MSD Sample Id: 661936-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	80.8	202	255	86	256	87	90-110	0	20	mg/kg	05.19.2020 14:18	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126381 — Matrix: Solid — Date Prep: 05.19.2020
MB Sample Id: 7703639-1-BLK — LCS Sample Id: 7703639-1-BKS — LCSD Sample Id: 7703639-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1030	103	907	91	70-135	13	35	mg/kg	05.19.2020 11:17	
Diesel Range Organics (DRO)	<50.0	1000	913	91	805	81	70-135	13	35	mg/kg	05.19.2020 11:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	130		116		117		70-135	%	05.19.2020 11:17
o-Terphenyl	130		112		97		70-135	%	05.19.2020 11:17

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126381 — Matrix: Solid — Date Prep: 05.19.2020
MB Sample Id: 7703639-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.19.2020 10:56	

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

QC Summary 661936

LT Environmental, Inc.

Nash Unit 302H-402H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126381 Matrix: Soil Date Prep: 05.19.2020
Parent Sample Id: 661935-002 MS Sample Id: 661935-002 S MSD Sample Id: 661935-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	970	97	994	99	70-135	2	35	mg/kg	05.19.2020 12:18	
Diesel Range Organics (DRO)	<49.9	997	826	83	1030	103	70-135	22	35	mg/kg	05.19.2020 12:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		130		70-135	%	05.19.2020 12:18
o-Terphenyl	88		103		70-135	%	05.19.2020 12:18

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126452 Matrix: Solid Date Prep: 05.19.2020
MB Sample Id: 7703646-1-BLK LCS Sample Id: 7703646-1-BKS LCSD Sample Id: 7703646-1-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	0.106	106	0.108	108	70-130	2	35	mg/kg	05.19.2020 12:06	
Toluene	<0.00200	0.100	0.102	102	0.101	101	70-130	1	35	mg/kg	05.19.2020 12:06	
Ethylbenzene	<0.00200	0.100	0.0942	94	0.0939	94	71-129	0	35	mg/kg	05.19.2020 12:06	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.193	97	70-135	1	35	mg/kg	05.19.2020 12:06	
o-Xylene	<0.00200	0.100	0.0992	99	0.0998	100	71-133	1	35	mg/kg	05.19.2020 12:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		104		105		70-130	%	05.19.2020 12:06
4-Bromofluorobenzene	99		94		93		70-130	%	05.19.2020 12:06

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126452 Matrix: Soil Date Prep: 05.19.2020
Parent Sample Id: 661935-001 MS Sample Id: 661935-001 S MSD Sample Id: 661935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.117	117	70-130	6	35	mg/kg	05.19.2020 12:47	
Toluene	<0.00200	0.100	0.105	105	0.111	111	70-130	6	35	mg/kg	05.19.2020 12:47	
Ethylbenzene	<0.00200	0.100	0.0968	97	0.103	103	71-129	6	35	mg/kg	05.19.2020 12:47	
m,p-Xylenes	<0.00401	0.200	0.198	99	0.210	105	70-135	6	35	mg/kg	05.19.2020 12:47	
o-Xylene	<0.00200	0.100	0.0993	99	0.105	105	71-133	6	35	mg/kg	05.19.2020 12:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		102		70-130	%	05.19.2020 12:47
4-Bromofluorobenzene	95		94		70-130	%	05.19.2020 12:47

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

XENCO LABORATORIES

Chain of Custody

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

Work Order No: 66936

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:	emoreno@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

		Turn Around	
Project Name:	NASH UNIT 302H-402 H	Routine	☒
Project Number:	012919253	Rush:	
P.O. Number:			
Sampler's Name:	Ezequiel Moreno	Due Date:	

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Temperature (°C):	1.8	Thermometer ID: TNM007
Received Intact:	(Yes) No	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor: -0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers: 4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH04	S	5/18/20	1240	2'	1	X	X	X	
PH05	↓	↓	1302	2'	↓	↓	↓	↓	
PH06	↓	↓	1430	1'	↓	↓	↓	↓	
PH06A	↓	↓	1440	2'	↓	↓	↓	↓	

Work Order Notes

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

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

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

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 [signature]	[signature]	5/19/20 08:15	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.19.2020 08.15.00 AM

Work Order #: 661936

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.8	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 05.19.2020

Checklist reviewed by: Jessica Kramer Date: 05.19.2020

Jessica Kramer

Certificate of Analysis Summary 662289

LT Environmental, Inc., Arvada, CO

Project Name: Nash 302H-402H

Project Id: 012919254
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu 05.21.2020 13:50
Report Date: 05.23.2020 12:38
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	662289-001		662289-002					
	Field Id:	PH01		PH02					
	Depth:	0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	05.21.2020 10:15		05.21.2020 10:20					
BTEX by EPA 8021B	***Extracted:***	05.21.2020 17:28		05.21.2020 17:28					
	Analyzed:	05.21.2020 22:31		05.21.2020 22:51					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00202	0.00202				
Toluene		<0.00198	0.00198	<0.00202	0.00202				
Ethylbenzene		<0.00198	0.00198	<0.00202	0.00202				
m,p-Xylenes		<0.00396	0.00396	<0.00404	0.00404				
o-Xylene		<0.00198	0.00198	<0.00202	0.00202				
Total Xylenes		<0.00198	0.00198	<0.00202	0.00202				
Total BTEX		<0.00198	0.00198	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	05.21.2020 17:43		05.21.2020 17:43					
	Analyzed:	05.22.2020 00:45		05.22.2020 01:02					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		385	49.8	296	50.1				
TPH by SW8015 Mod	***Extracted:***	05.21.2020 17:00		05.21.2020 17:00					
	Analyzed:	05.22.2020 04:10		05.22.2020 04:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.2	50.2				
Diesel Range Organics (DRO)		<50.3	50.3	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.2	50.2				
Total GRO-DRO		<50.3	50.3	<50.2	50.2				
Total TPH		<50.3	50.3	<50.2	50.2				

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

Jessica Kramer
Project Manager

Analytical Report 662289

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash 302H-402H

012919254

05.23.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-6)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.23.2020

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

Reference: XENCO Report No(s): **662289**
Nash 302H-402H
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) 662289. 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. 662289 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 662289

LT Environmental, Inc., Arvada, CO

Nash 302H-402H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	05.21.2020 10:15	0.5 ft	662289-001
PH02	S	05.21.2020 10:20	0.5 ft	662289-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash 302H-402H

Project ID: *012919254*
Work Order Number(s): *662289*

Report Date: *05.23.2020*
Date Received: *05.21.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 662289

LT Environmental, Inc., Arvada, CO

Nash 302H-402H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	05.21.2020 13:50
Lab Sample Id:	662289-001	Date Collected:	05.21.2020 10:15	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.21.2020 17:43	Basis:	Wet Weight
Seq Number:	3126735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**385**	49.8	mg/kg	05.22.2020 00:45		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.21.2020 17:00	Basis:	Wet Weight
Seq Number:	3126755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.22.2020 04:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.22.2020 04:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.22.2020 04:10	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.22.2020 04:10	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.22.2020 04:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.22.2020 04:10	
o-Terphenyl	84-15-1	111	%	70-135	05.22.2020 04:10	

Certificate of Analytical Results 662289

LT Environmental, Inc., Arvada, CO

Nash 302H-402H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	05.21.2020 13:50
Lab Sample Id:	662289-001	Date Collected:	05.21.2020 10:15	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MRB	Date Prep:	05.21.2020 17:28	Basis:	Wet Weight
Seq Number:	3126744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	05.21.2020 22:31	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.21.2020 22:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.21.2020 22:31	
1,4-Difluorobenzene	540-36-3	109	%	70-130	05.21.2020 22:31	

Certificate of Analytical Results 662289

LT Environmental, Inc., Arvada, CO

Nash 302H-402H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	05.21.2020 13:50
Lab Sample Id:	662289-002	Date Collected:	05.21.2020 10:20	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.21.2020 17:43	Basis:	Wet Weight
Seq Number:	3126735				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**296**	50.1	mg/kg	05.22.2020 01:02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.21.2020 17:00	Basis:	Wet Weight
Seq Number:	3126755				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.22.2020 04:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.22.2020 04:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.22.2020 04:31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.22.2020 04:31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.22.2020 04:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	05.22.2020 04:31	
o-Terphenyl	84-15-1	102	%	70-135	05.22.2020 04:31	

Certificate of Analytical Results 662289

LT Environmental, Inc., Arvada, CO

Nash 302H-402H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	05.21.2020 13:50
Lab Sample Id:	662289-002	Date Collected:	05.21.2020 10:20	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MRB	Date Prep:	05.21.2020 17:28	Basis:	Wet Weight
Seq Number:	3126744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.21.2020 22:51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.21.2020 22:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	05.21.2020 22:51	
4-Bromofluorobenzene	460-00-4	94	%	70-130	05.21.2020 22:51	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 662289

LT Environmental, Inc.

Nash 302H-402H

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126735 — Matrix: Solid — Date Prep: 05.21.2020
MB Sample Id: 7703898-1-BLK — LCS Sample Id: 7703898-1-BKS — LCSD Sample Id: 7703898-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<50.0	1250	1240	99	1240	99	90-110	0	20	mg/kg	05.22.2020 00:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126735 — Matrix: Soil — Date Prep: 05.21.2020
Parent Sample Id: 662289-001 — MS Sample Id: 662289-001 S — MSD Sample Id: 662289-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	385	198	603	110	571	93	90-110	5	20	mg/kg	05.22.2020 00:50	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3126735 — Matrix: Soil — Date Prep: 05.21.2020
Parent Sample Id: 662292-008 — MS Sample Id: 662292-008 S — MSD Sample Id: 662292-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	129	201	308	89	307	89	90-110	0	20	mg/kg	05.22.2020 02:19	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126755 — Matrix: Solid — Date Prep: 05.21.2020
MB Sample Id: 7703923-1-BLK — LCS Sample Id: 7703923-1-BKS — LCSD Sample Id: 7703923-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	953	95	889	89	70-135	7	35	mg/kg	05.21.2020 20:41	
Diesel Range Organics (DRO)	<50.0	1000	852	85	805	81	70-135	6	35	mg/kg	05.21.2020 20:41	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		125		115		70-135	%	05.21.2020 20:41
o-Terphenyl	103		104		99		70-135	%	05.21.2020 20:41

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3126755 — Matrix: Solid — Date Prep: 05.21.2020
MB Sample Id: 7703923-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.21.2020 20:20	

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

QC Summary 662289

LT Environmental, Inc.

Nash 302H-402H

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3126755 Matrix: Soil Date Prep: 05.21.2020
Parent Sample Id: 662199-011 MS Sample Id: 662199-011 S MSD Sample Id: 662199-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	903	90	1000	100	70-135	10	35	mg/kg	05.21.2020 21:43	
Diesel Range Organics (DRO)	<50.2	1000	799	80	895	90	70-135	11	35	mg/kg	05.21.2020 21:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		128		70-135	%	05.21.2020 21:43
o-Terphenyl	111		124		70-135	%	05.21.2020 21:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126744 Matrix: Solid Date Prep: 05.21.2020
MB Sample Id: 7703835-1-BLK LCS Sample Id: 7703835-1-BKS LCSD Sample Id: 7703835-1-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	0.114	114	0.114	114	70-130	0	35	mg/kg	05.21.2020 14:58	
Toluene	<0.00200	0.100	0.109	109	0.110	110	70-130	1	35	mg/kg	05.21.2020 14:58	
Ethylbenzene	<0.00200	0.100	0.104	104	0.103	103	71-129	1	35	mg/kg	05.21.2020 14:58	
m,p-Xylenes	<0.00400	0.200	0.214	107	0.214	107	70-135	0	35	mg/kg	05.21.2020 14:58	
o-Xylene	<0.00200	0.100	0.107	107	0.107	107	71-133	0	35	mg/kg	05.21.2020 14:58	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		105		105		70-130	%	05.21.2020 14:58
4-Bromofluorobenzene	95		91		89		70-130	%	05.21.2020 14:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3126744 Matrix: Soil Date Prep: 05.21.2020
Parent Sample Id: 662199-021 MS Sample Id: 662199-021 S MSD Sample Id: 662199-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.113	113	0.117	116	70-130	3	35	mg/kg	05.21.2020 20:08	
Toluene	<0.00200	0.100	0.109	109	0.127	126	70-130	15	35	mg/kg	05.21.2020 20:08	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0987	98	71-129	2	35	mg/kg	05.21.2020 20:08	
m,p-Xylenes	<0.00401	0.200	0.209	105	0.204	101	70-135	2	35	mg/kg	05.21.2020 20:08	
o-Xylene	<0.00200	0.100	0.102	102	0.100	99	71-133	2	35	mg/kg	05.21.2020 20:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	05.21.2020 20:08
4-Bromofluorobenzene	94		94		70-130	%	05.21.2020 20:08

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

Chain of Custody

Work Order No: 1616289

XENCO LABORATORIES

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

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

Work Order Comments

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

Project Name:	NASH 302H-402H	Turn Around	
Project Number:	012919254	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Ezequiel Moreno	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	1.6	Thermometer ID	NM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	5/21/20	1015	0.5'	1	X	X	X
PH02	S	5/21/20	1020	0.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		5/21/20 13:50	2		
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.21.2020 01.50.00 PM

Work Order #: 662289

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	1.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples received in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 05.21.2020

Checklist reviewed by: Jessica Kramer Date: 05.22.2020

Jessica Kramer