A proud member of WSP

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

April 10, 2020

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

RE: Closure Request
Nash Unit #38
Remediation Permit Number 2RP-4451
Eddy County, New Mexico

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request report detailing site assessment, soil sampling, and excavation activities at the Nash Unit #38 (Site) in Unit N, Section 13, Township 23 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil after a release of crude oil and produced water at the Site.

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

RELEASE BACKGROUND

On September 21, 2017, the stuffing box leaked and released approximately 6 barrels (bbls) of crude oil and produced water onto the surface of the well pad. All released fluids remained on the well pad near the wellhead release area. A vacuum truck recovered approximately 5 bbls of free-standing fluid. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on October 20, 2017 and was assigned Remediation Permit (RP) Number 2RP-4451 (Attachment 1). Based on the site assessment activities and results of the soil sampling events, XTO is requesting no further action for this release.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be less than 50 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 321717103561001, located approximately 3,868 feet south of the Site. The water well has a depth to groundwater of 50 feet bgs, and a total depth of 54.14 feet bgs. Ground surface elevation at the water well location is 3,029 feet above mean sea level (AMSL), which is approximately 39 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream located approximately 285 feet east of the Site. A saline lake is located approximately 1,100 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, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

During October 2019, LTE personnel inspected the Site to evaluate the release extent. Surficial hydrocarbon staining was observed in the release area southeast of the wellhead. Between November 2019 and February 2020, LTE personnel returned to the site to oversee site assessment and excavation activities.

Potholes were advanced via backhoe at eight locations within and around the release area to assess the lateral and vertical extent impacted soil. Potholes PH01 through PH08 were advanced to depths ranging from 3 feet to 8 feet bgs. Delineation soil samples were collected from each pothole from depths ranging from 1 foot to 8 feet bgs. Due to the proximity of the saline lake, a borehole (BG01) was advanced via hand-auger in the pasture area north of the Site to determine naturally occurring chloride concentrations in the soil. Background soil samples were collected from borehole BG01 from depths ranging from of 0.5 feet to 6 feet bgs. Soil from the potholes

and background borehole was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the potholes and background borehole were logged on lithologic/soil sampling logs, which are included in Attachment 2. The pothole and background borehole locations are depicted on Figure 2.

Impacted soil was excavated from the release area as indicated by surficial hydrocarbon staining and field screening activities. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Impacted soil was excavated to a depth of 3 feet bgs. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation from depths ranging from the ground surface to 3 feet bgs. Composite soil samples FS01 and FS02 were collected from the floor of the excavation from a depth of 3 feet bgs. The excavation extent and excavation soil sample locations are depicted on Figure 3.

The delineation and excavation 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-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

The excavation measured approximately 800 square feet in area and was completed to a depth of 3 feet bgs. A total of approximately 90 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfill located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results for the background soil samples indicated naturally occurring chloride concentrations ranging from 19,000 mg/kg in the sample collected at 0.5 feet bgs to 1,380 mg/kg in the sample collected at 6 feet bgs.

Laboratory analytical results for the delineation soil samples, collected from potholes PH01 through PH08, and excavation soil samples SW01 through SW04, FS01, and FS02 indicated that

BTEX and TPH concentrations were compliant with the Closure Criteria. Laboratory analytical results indicated that chloride concentrations exceeded the Closure Criteria in the delineation and excavation soil samples; however, chloride concentrations were less than and/or comparable to the naturally occurring chloride concentrations established in the background soil samples. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Site assessment and excavation activities were conducted at the Site to address impacts to soil resulting from the September 21, 2017 release. All except 1 bbl of released fluids were recovered during initial response activities. The Site is located within close proximity to a saline lake; therefore, background soil samples were collected to establish naturally occurring chloride concentrations at the Site. Laboratory analytical results for the background soil samples indicated naturally occurring chloride concentrations ranging from 1,380 mg/kg to 19,000 mg/kg.

Delineation soil sampling was completed in and around the release area to assess the lateral and vertical extent of impacted soil. Laboratory analytical results for the delineation soil samples indicated that BTEX and TPH concentrations were compliant with the Closure Criteria and chloride concentrations were less than and/or comparable to the naturally occurring chloride concentrations at the Site.

Impacted soil was excavated from the release area as indicated by surficial hydrocarbon staining. Laboratory analytical results for the excavation soil samples indicated that BTEX and TPH concentrations were compliant with the Closure Criteria and chloride concentrations were less than and/or comparable to the naturally occurring chloride concentrations at the Site. 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 2RP-4451. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included in Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Aimee Cole
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Bureau of Land Management
Mike Bratcher, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-4451)
Attachment 2	Lithologic / Soil Sample Logs
Attachment 3	Photographic Log
Attachment 4	Laboratory Analytical Reports

FIGURES

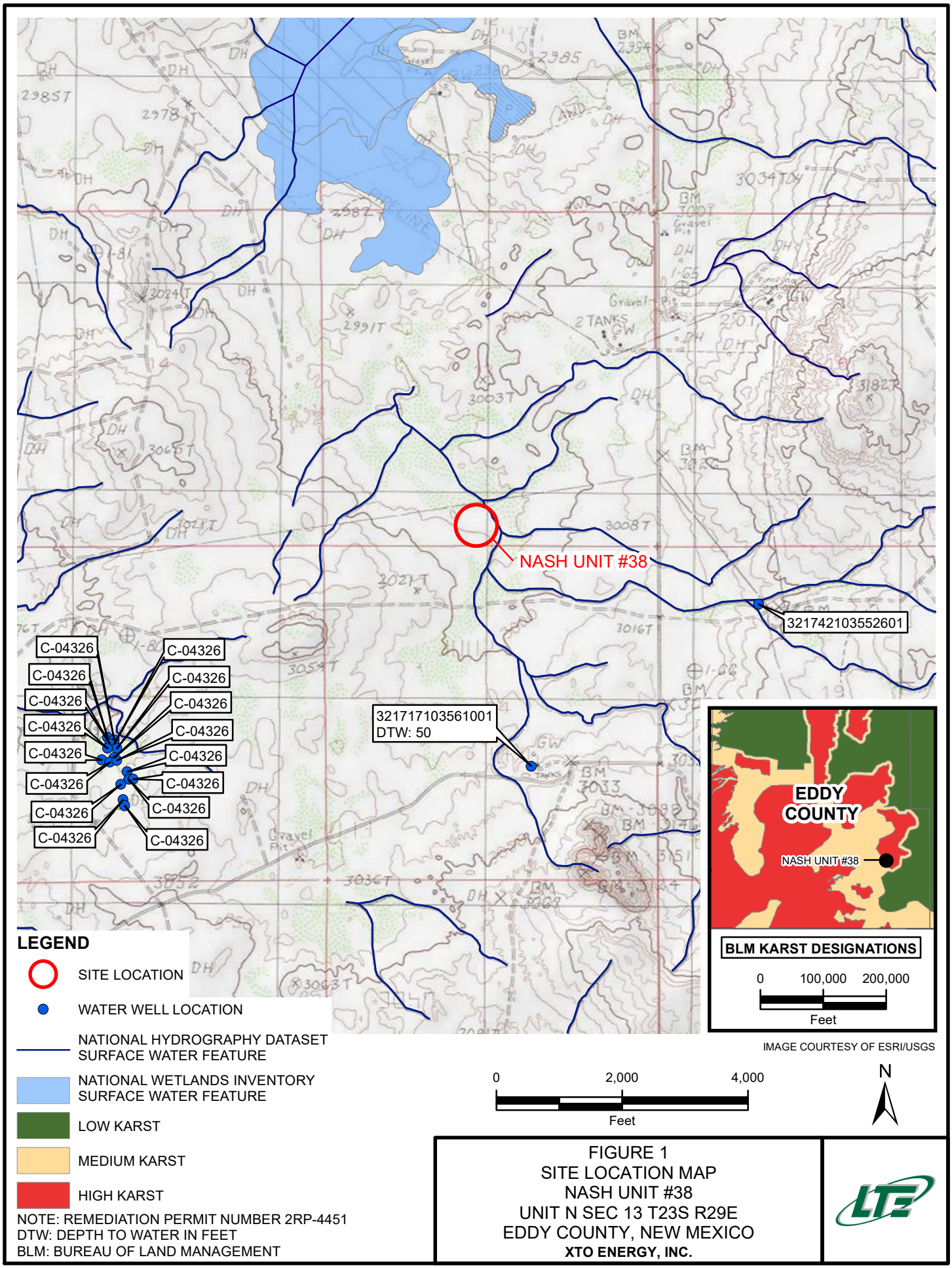

FIGURE 1
SITE LOCATION MAP
NASH UNIT #38
UNIT N SEC 13 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917040_NASH #38\012917040_FIG01_RECEPTOR_SL_2020.mxd

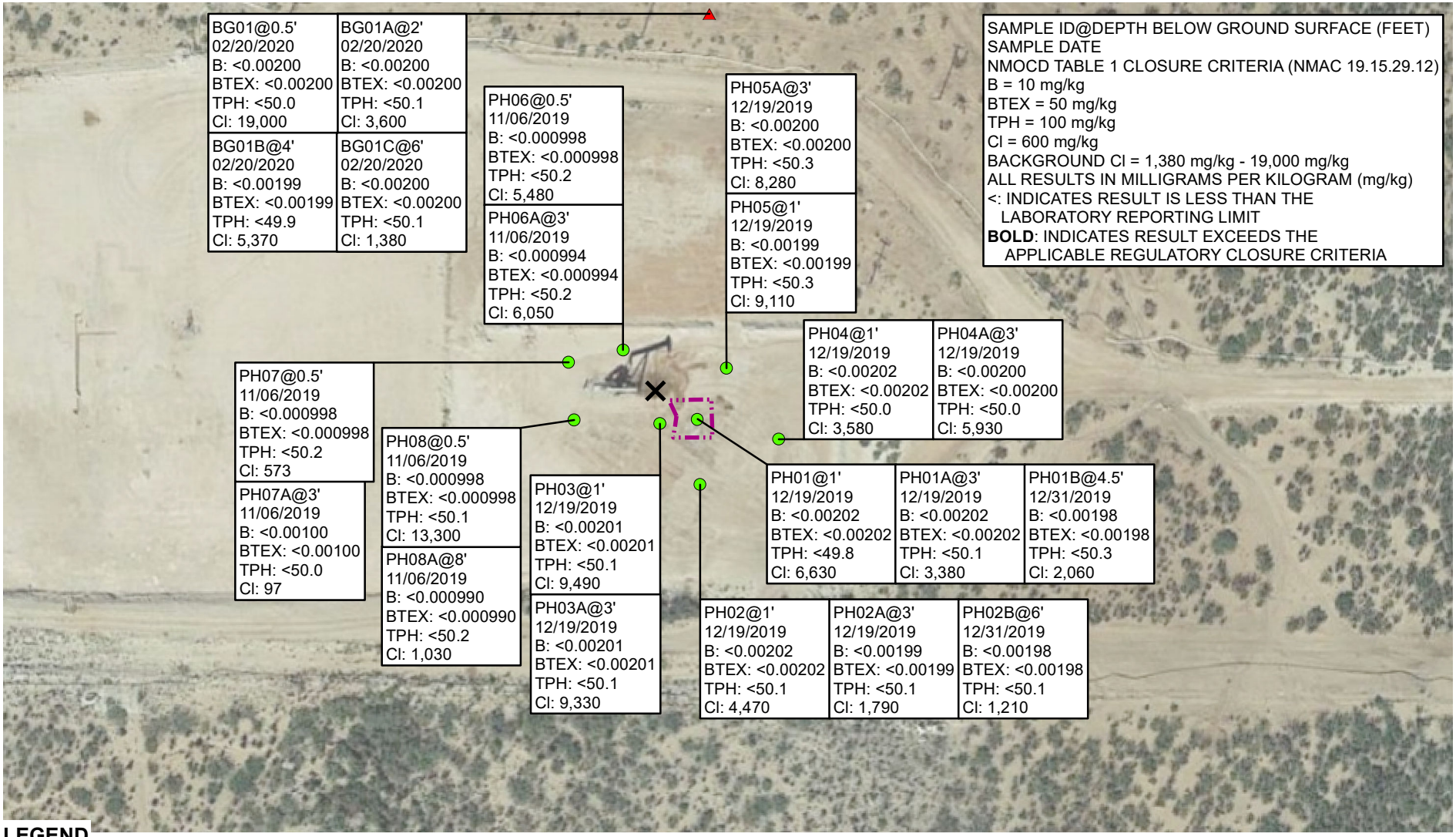

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

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

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: REMEDIATION PERMIT NUMBER 2RP-4451

0 100 200
Feet

N

FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
NASH UNIT #38
UNIT N SEC 13 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012917040_NASH #38\012917040_FIG02_DELINEATION_4451_NB.mxd

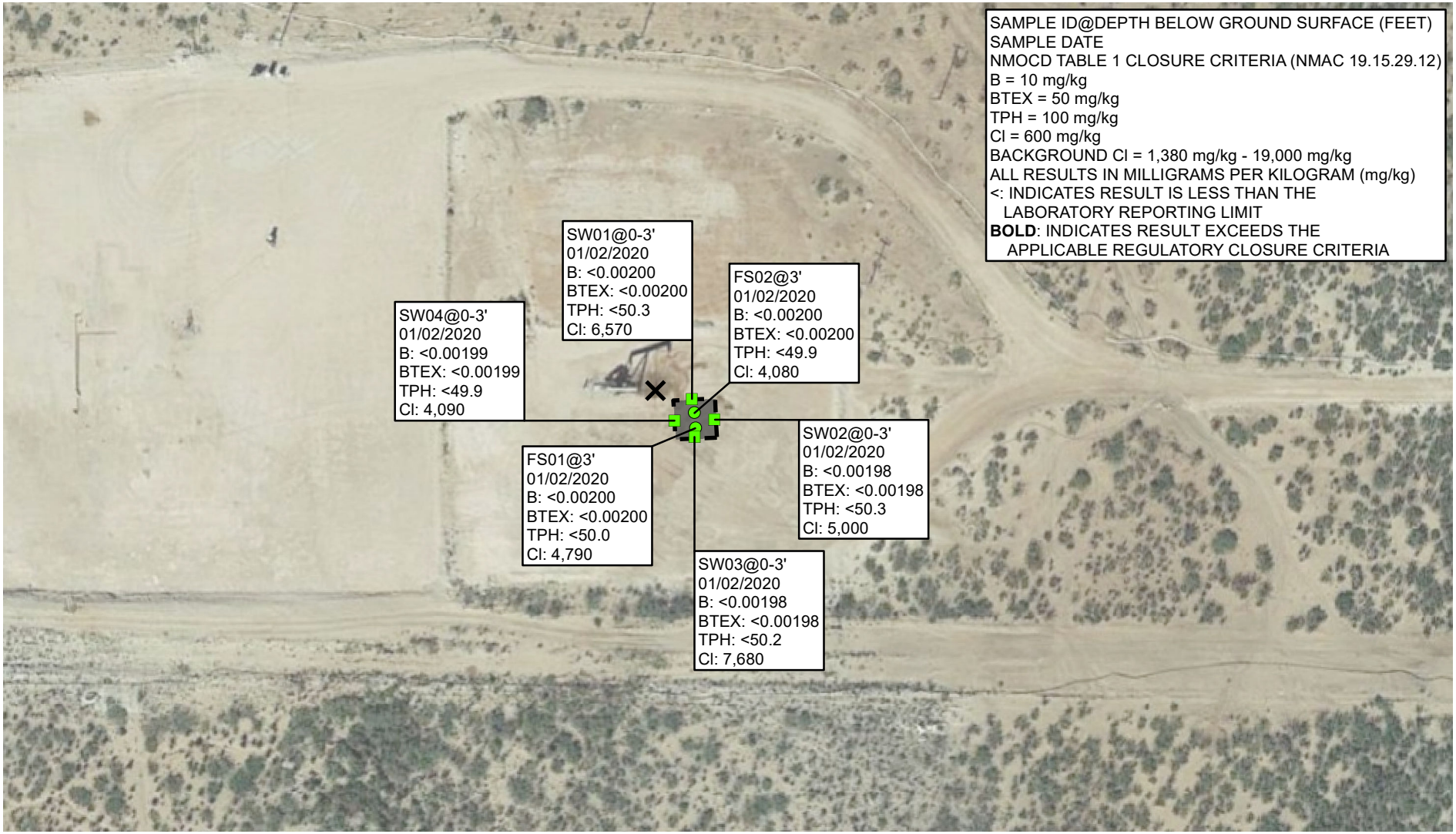

IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

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

0 100 200
Feet

N

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: REMEDIATION PERMIT NUMBER 2RP-4451

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
NASH UNIT #38
UNIT N SEC 13 T23S R29E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

NASH UNIT #38
REMEDIATION PERMIT NUMBER 2RP-4451
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**
BG01	0.5	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	19,000
BG01A	2	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	3,600
BG01B	4	02/20/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	5,370
BG01C	6	02/20/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,380
PH01	1	12/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	6,630*
PH01A	3	12/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	3,380*
PH01B	4.5	12/31/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	2,060*
PH02	1	12/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	4,470*
PH02A	3	12/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	1,790*
PH02B	6	12/31/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	1,210*
PH03	1	12/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	9,490*
PH03A	3	12/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	9,330*
PH04	1	12/19/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	3,580*
PH04A	3	12/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	5,930*
PH05	1	12/19/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	9,110*
PH05A	3	12/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	8,280*
PH06	0.5	11/06/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	5,480*
PH06A	3	11/06/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<50.2	<50.2	<50.2	<50.2	<50.2	6,050*
PH07	0.5	11/06/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.2	<50.2	<50.2	<50.2	<50.2	573*
PH07A	3	11/06/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	97*
PH08	0.5	11/06/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<50.1	<50.1	<50.1	<50.1	<50.1	13,300*
PH08A	8	11/06/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.2	<50.2	<50.2	<50.2	<50.2	1,030*

TABLE 1
SOIL ANALYTICAL RESULTS

NASH UNIT #38
REMEDIATION PERMIT NUMBER 2RP-4451
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**
FS01	3	01/02/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	4,790*
FS02	3	01/02/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	4,080*
SW01	0 - 3	01/02/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	6,570*
SW02	0 - 3	01/02/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	5,000*
SW03	0 - 3	01/02/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	7,680*
SW04	0 - 3	01/02/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	4,090*

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

mg/kg - milligrams per kilogram

Bold - indicates result exceeds the applicable regulatory standard

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

NE - not established

TPH - total petroleum hydrocarbons

* chloride concentration below background levels

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-4451)

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 20 2017
RECEIVED

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1729752251

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: XTO Energy OGRID# 5380	Contact: Amy Ruth
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Nash Unit #38	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-29737

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	13	23S	29E	330	South	2450	West	Eddy

Latitude 32.298632° **Longitude** -103.938861°

NATURE OF RELEASE

Type of Release: Produced water and crude oil	Volume of Release: 6 bbls	Volume Recovered: 5 bbls
Source of Release: Stuffing box	Date and Hour of Occurrence: 9/21/2017, time unknown	Date and Hour of Discovery: 9/21/2017, 1:30 P.M.
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	

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

Describe Cause of Problem and Remedial Action Taken.*
Release was caused by a stuffing box leak. Stuffing box packing was replaced.

Describe Area Affected and Cleanup Action Taken.*
All fluid remained within the area of the well pad. Vacuum truck and recovered standing fluid.

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

Signature:
Printed Name: Amy C. Ruth
Title: Environmental Coordinator
E-mail Address: Amy_Ruth@xtoenergy.com
Date: 10/20/2017 Phone: 432-661-0571

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:
Approval Date: 10/24/17 Expiration Date: N/A
Conditions of Approval: See attached
Attached ☒ 2RP-4451

* Attach Additional Sheets If Necessary

Please refer to the New Mexico Oil Conservation Division Website for updated form(s) at: http://www.emnrd.state.nm.us/OCD/forms.html Thank you

10/24/17 AB

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	2RP-4451
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-4451
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude N 32.298632 Longitude W -103.938861
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Nash Unit #38	Site Type: Exploration and Production
Date Release Discovered: 9/21/2017	API# *(if applicable):* 30-015-29737

Unit Letter	Section	Township	Range	County
N	13	23S	29E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls): 6 (oil/produced water combined)	Volume Recovered (bbls): 5 (oil/produced water combined)
☒ 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)	Volume/Weight Recovered (provide units)

Cause of Release
The release was caused by a stuffing box leak.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4451
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? Release volume was less than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 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: 4-10-2020

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

OCD Only

Received by: Date:

Incident ID	
District RP	2RP-4451
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?	<50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☒ Yes ☐ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4451
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: 4-10-2020

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	nAB1729752251
District RP	2RP-4451
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: 4-10-2020

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: Bradford Billings Date: 09/15/2021

Printed Name: Bradford Billings Title: Envi.Spec.A

ATTACHMENT 2: LITHOLOGIC / SOIL SAMPLE LOGS

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

Identifier: PH01	Date: 12.19.2019
Project Name: Nash Unit #38	RP Number: 2RP-4451
Logged By: SL	Method: Backhoe
Hole Diameter: —	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening: PID Chloride

Comments: TD @ 3' - Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	3489	0.0	Y	PH01	0 1	1	SP-SM	1-2 Sand with caliche, brown, no odor, no stain, poorly graded, trace silt
D	2134	6.0	N		2			2 – no stain
D	1602	0.0	N	PH01A	3	3	CCHE	3- caliche, tan, brown, trace silt, no odor, no stain
					4 5 6 7 8 9 10 11 12			Refusal / TD @ 3'

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

Identifier: PH02	Date: 12.19.2019
Project Name: Nash Unit #38	RP Number: 2RP-4451
Logged By: SL	Method: Backhoe
Lat/Long:	Field Screening: PID / Chloride
Hole Diameter:	Total Depth: 3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: TD @ 3' - Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	2622	0.0	N	PH02	0 1	1	S-SM	1-2 Silty Sand w/ caliche
D	1988	0.0	N		2			Brown, m-f, poorly graded, no odor, no stain
D	1075	0.0	N	PH02A	3	3	CCHE	3- caliche, tan, offwhite, no odor, no stain
					4 5 6 7 8 9 10 11 12			TD @ 3' - Refusal

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

Identifier:	Date:
PH03	12.19.2019
Project Name:	**RP Number:**
Nash Unit #3B	2RP-4451
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: JL / Method: Backhoe
Lat/Long:	Field Screening: (PID) Chloride / Hole Diameter: — / Total Depth: 3'

Comments: TD @ 3' - Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	6468	0.0	N	1	0–1	PH03	S-SM	1-2 silty sand, Brown, no stain, no odor, m-f, poorly graded
D	3248	0.0	N		2			
D	4626	0.0	N	3	3	PH03A	CCHE	3- caliche, tan, off white, no odor, no stain
					4–12			TD @ 3' - Refusal

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

Identifier:	Date:
PH04	12.19.2019
Project Name:	**RP Number:**
Nash Unit #38	2RP-4451
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: SL / Method: Backhoe
Lat/Long:	Field Screening: PID / Chloride — Hole Diameter: — Total Depth: 3'

Comments: TD @ 3', Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	2822	0.0	N	PH04	1	1	SP SM	1-3 silty sand, Brown, no Stain, no odor, m-f, poorly graded
D	1988	0.0	N		2			-2- increasing caliche, tan off white
D	3024	0.0	N	PH04A	3	3		TD @ 3' - Refusal
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH05	12.19.2019
Project Name:	**RP Number:**
Nash Unit #36	2RP-4451

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: PID Chloride	Logged By: SL	Method: Backhoe
		Hole Diameter:	Total Depth: 3'

Comments: TD @ 3' - Refusal

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	4626	0.0	N	PH05	1	1	SM	1-3 Silty sand, Brown, no Stain, no odor, m-f, poorly graded, some tan caliche
D	4626	0.0	N		2			2- increase caliche
D	3024	0.0	N	PH05A	3	3		TD @ 3', Refusal
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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

Identifier:	Date:
PH06	11-6-2019
Project Name:	**RP Number:**
Nash 38	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: L.A.D.	Method: Backhoe
Lat/Long:	Field Screening: CHLORIDES, PID.
Hole Diameter:	Total Depth: 8'

Comments:

Time	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1308	Slight	4.8 (534.4)	0.0	None	PH06	0	0.5'		Red-brown color mix, faint odor, slightly moist, low clumping, poorly graded, sand/silt mix, no organics
1312	Slight	~~4.8~~ (534.4) 5.8 (790.6) LAB	0.0	None	PH06A	1 2	1'		Dark brown, no odor, slightly moist, slight clumping, poorly graded, silty sand, no organics
1318	Slight	5.8 (790.6) (~~5.7~~ 790.1 LAB)	0.0	None	PH06B	3	3'		SAA
1334	Moist	5.6 (732.8)	0.0	None	PH06C	4 5	4'		SAA, but moist
1356	Moist	(5.6) 2452.6	~~0.0~~ 0.1	None	PH06D	6 7	6'		Light brown/cream color, no odor, ~~slightly~~ LAB moist, poorly graded, caliche, no organics
1409	Moist	(5.6) 1719.2	0.0	None	PH06E	8 9 10 11 12	8'		SAA, but larger grain size

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

Identifier:	Date:
PH07	11-6-2019
Project Name:	**RP Number:**
Nash 38	
LITHOLOGIC / SOIL SAMPLING LOG	Logged By: L.A.D. / Method: Backhoe
Lat/Long:	Field Screening: CHLORIDES, PID. / Hole Diameter: / Total Depth: 3'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Time 1421 Slight	3.6 (250.4)	0.0	Slight Source	PH07	0	0.5'		Very light brown, red undertone, no odor, slightly moist very low clumping, poorly graded, sand/caliche/silt mix no organics
1425 Slight	2.2 (341.6)	0.0	None	PH07A	1 2	1'		Dark brown, no odor, slightly moist, slight clumping, poorly graded, silty sand, no organics
1429 Slight	0.8 (479.2	0.0	None	PH07B	3 4 5 6 7 8 9 10 11 12	3'		Dark brown, no odor, slightly moist, slight clumping, poorly graded, silty sand, no organics

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

Identifier: PH08	Date: 11-6-2019
Project Name: Nash 38	RP Number:
Logged By: B.B.	Method: Backhoe
Field Screening: CHLORIDES, PID.	Hole Diameter:
Lat/Long:	Total Depth: 8'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

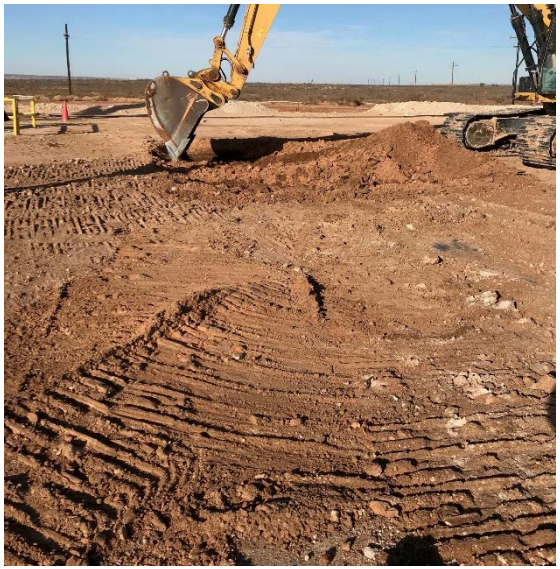
Time	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
1454	Slight	7.0 12460	0.0	None	PH08	0	0.5'		Light brown, no odor, slightly moist, very low clumping, poorly graded, silty sand, N organics
1505	Slight	(5.8) 7901.6	0.0	None	PH08A	1 2	1'		Dark brown, no odor, slightly moist, slight clumping poorly graded, silty sand, no organics
1509	Slight	5.8 (1248)	0.0	None	PH08B	3 4	3'		SAA
1525	Slighty	2922.2	0.0	None	PH08C	5	4'		SAA, but medium graded, and more clumpy.
1536	Slighty	1075.2	0.0	None	PH08D	6 7	6'		Light brown/cream color, no odor, ~~slightly~~ moist, poorly graded, calcite, no organics
1505	Moist	1075.2	0.1	None	PH08E	8 9 10 11 12	8'		SAA, but more moist and larger grain size

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: West facing view of release area and surficial staining.

Photograph 2: Southeast facing view of stained area during potholing activities.



Photograph 3: North facing view during excavation activities.

Photograph 4: North facing view of open excavation.

Nash Unit #38
Eddy County, New Mexico
Photographs Taken: December 2019 and January 2020

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 647240

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Unit #38

012917040

23-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

23-DEC-19

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

Reference: XENCO Report No(s): **647240**
Nash Unit #38
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) 647240. 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. 647240 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	12-19-19 09:30	1 ft	647240-001
PH01A	S	12-19-19 09:50	3 ft	647240-002
PH02	S	12-19-19 09:30	1 ft	647240-003
PH02A	S	12-19-19 10:00	3 ft	647240-004
PH03	S	12-19-19 10:20	1 ft	647240-005
PH03A	S	12-19-19 10:50	3 ft	647240-006
PH04	S	12-19-19 11:00	1 ft	647240-007
PH04A	S	12-19-19 11:20	3 ft	647240-008
PH05	S	12-19-19 11:30	1 ft	647240-009
PH05A	S	12-19-19 11:50	3 ft	647240-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Unit #38

Project ID: *012917040*
Work Order Number(s): *647240*

Report Date: *23-DEC-19*
Date Received: *12/20/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111386 Chloride by EPA 300

Lab Sample ID 647240-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647240-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.

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

Batch: LBA-3111395 BTEX by EPA 8021B

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

Certificate of Analysis Summary 647240

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Dec-20-19 11:03 am
Report Date: 23-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647240-001		647240-002		647240-003		647240-004		647240-005		647240-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	1- ft		3- ft		1- ft		3- ft		1- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-19-19 09:30		Dec-19-19 09:50		Dec-19-19 09:30		Dec-19-19 10:00		Dec-19-19 10:20		Dec-19-19 10:50	
BTEX by EPA 8021B	***Extracted:***	Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30	
	Analyzed:	Dec-20-19 15:28		Dec-20-19 15:46		Dec-20-19 16:03		Dec-20-19 16:20		Dec-20-19 16:38		Dec-20-19 16:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Toluene		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
m,p-Xylenes		<0.00403	0.00403	<0.00404	0.00404	<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402
o-Xylene		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total Xylenes		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total BTEX		<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00	
	Analyzed:	Dec-20-19 14:27		Dec-20-19 14:33		Dec-20-19 14:50		Dec-20-19 14:56		Dec-20-19 15:02		Dec-20-19 15:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6630	200	3380	200	4470	198	1790	202	9490	200	9330	248
TPH by SW8015 Mod	***Extracted:***	Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00	
	Analyzed:	Dec-20-19 13:24		Dec-20-19 13:44		Dec-20-19 13:44		Dec-20-19 14:04		Dec-20-19 14:04		Dec-20-19 14:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1
Diesel Range Organics (DRO)		<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1
Total GRO-DRO		<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1
Total TPH		<49.8	49.8	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.1	50.1

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 647240

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Dec-20-19 11:03 am
Report Date: 23-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647240-007		647240-008		647240-009		647240-010					
	Field Id:	PH04		PH04A		PH05		PH05A					
	Depth:	1- ft		3- ft		1- ft		3- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Dec-19-19 11:00		Dec-19-19 11:20		Dec-19-19 11:30		Dec-19-19 11:50					
BTEX by EPA 8021B	***Extracted:***	Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30		Dec-20-19 11:30					
	Analyzed:	Dec-20-19 17:13		Dec-20-19 18:22		Dec-20-19 18:39		Dec-20-19 18:57					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00398	0.00398	<0.00401	0.00401				
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00		Dec-20-19 13:00					
	Analyzed:	Dec-20-19 15:14		Dec-20-19 15:19		Dec-20-19 15:37		Dec-20-19 15:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		3580	99.8	5930	198	9110	251	8280	201				
TPH by SW8015 Mod	***Extracted:***	Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00		Dec-20-19 12:00					
	Analyzed:	Dec-20-19 14:23		Dec-20-19 14:43		Dec-20-19 15:05		Dec-20-19 15:05					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.3	50.3	<50.3	50.3				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.3	50.3	<50.3	50.3				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.3	50.3	<50.3	50.3				
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.3	50.3	<50.3	50.3				
Total TPH		<50.0	50.0	<50.0	50.0	<50.3	50.3	<50.3	50.3				

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

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH01** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-001 Date Collected: 12.19.19 09.30 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6630**	200	mg/kg	12.20.19 14.27		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.20.19 13.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.20.19 13.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.20.19 13.24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.20.19 13.24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.20.19 13.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.20.19 13.24	
o-Terphenyl	84-15-1	99	%	70-135	12.20.19 13.24	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-001	Date Collected:	12.19.19 09.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.20.19 15.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.20.19 15.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.20.19 15.28	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.20.19 15.28	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH01A** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-002 Date Collected: 12.19.19 09.50 Sample Depth:3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3380**	200	mg/kg	12.20.19 14.33		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.20.19 13.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	12.20.19 13.44	
o-Terphenyl	84-15-1	103	%	70-135	12.20.19 13.44	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-002	Date Collected:	12.19.19 09.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.20.19 15.46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.20.19 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.20.19 15.46	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.20.19 15.46	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH02** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-003 Date Collected: 12.19.19 09.30 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4470**	198	mg/kg	12.20.19 14.50		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.20.19 13.44	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.20.19 13.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.20.19 13.44	
o-Terphenyl	84-15-1	100	%	70-135	12.20.19 13.44	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-003	Date Collected:	12.19.19 09.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.20.19 16.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.20.19 16.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.20.19 16.03	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.20.19 16.03	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH02A** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-004 Date Collected: 12.19.19 10.00 Sample Depth:3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1790**	202	mg/kg	12.20.19 14.56		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.20.19 14.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.20.19 14.04	
o-Terphenyl	84-15-1	103	%	70-135	12.20.19 14.04	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-004	Date Collected:	12.19.19 10.00	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.20.19 16.20	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.20.19 16.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.20.19 16.20	
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.20.19 16.20	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH03** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-005 Date Collected: 12.19.19 10.20 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9490**	200	mg/kg	12.20.19 15.02		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.20.19 14.04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.20.19 14.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.20.19 14.04	
o-Terphenyl	84-15-1	97	%	70-135	12.20.19 14.04	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-005	Date Collected:	12.19.19 10.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.20.19 16.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.20.19 16.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.20.19 16.38	
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.20.19 16.38	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH03A** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-006 Date Collected: 12.19.19 10.50 Sample Depth:3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9330**	248	mg/kg	12.20.19 15.08		25

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.20.19 14.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.20.19 14.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.20.19 14.23	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.20.19 14.23	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.20.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.20.19 14.23	
o-Terphenyl	84-15-1	101	%	70-135	12.20.19 14.23	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-006	Date Collected:	12.19.19 10.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.20.19 16.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.20.19 16.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	12.20.19 16.55	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.20.19 16.55	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH04** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-007 Date Collected: 12.19.19 11.00 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3580**	99.8	mg/kg	12.20.19 15.14		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.20.19 14.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.20.19 14.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.20.19 14.23	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.20.19 14.23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.20.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.20.19 14.23	
o-Terphenyl	84-15-1	97	%	70-135	12.20.19 14.23	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-007	Date Collected:	12.19.19 11.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.20.19 17.13	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.20.19 17.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.20.19 17.13	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.20.19 17.13	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH04A** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-008 Date Collected: 12.19.19 11.20 Sample Depth:3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5930**	198	mg/kg	12.20.19 15.19		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.20.19 14.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.20.19 14.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.20.19 14.43	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.20.19 14.43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.20.19 14.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	12.20.19 14.43	
o-Terphenyl	84-15-1	93	%	70-135	12.20.19 14.43	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-008	Date Collected:	12.19.19 11.20	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.20.19 18.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.19 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.20.19 18.22	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.20.19 18.22	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH05** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-009 Date Collected: 12.19.19 11.30 Sample Depth:1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9110**	251	mg/kg	12.20.19 15.37		25

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.20.19 15.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.20.19 15.05	
o-Terphenyl	84-15-1	102	%	70-135	12.20.19 15.05	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-009	Date Collected:	12.19.19 11.30	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.20.19 18.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.20.19 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	12.20.19 18.39	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.20.19 18.39	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id: **PH05A** Matrix: Soil Date Received:12.20.19 11.03

Lab Sample Id: 647240-010 Date Collected: 12.19.19 11.50 Sample Depth:3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.20.19 13.00 Basis: Wet Weight

Seq Number: 3111386

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8280**	201	mg/kg	12.20.19 15.43		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 12.20.19 12.00 Basis: Wet Weight

Seq Number: 3111438

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.20.19 15.05	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.20.19 15.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	12.20.19 15.05	
o-Terphenyl	84-15-1	97	%	70-135	12.20.19 15.05	

Certificate of Analytical Results 647240

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	12.20.19 11.03
Lab Sample Id:	647240-010	Date Collected:	12.19.19 11.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.20.19 11.30	Basis:	Wet Weight
Seq Number:	3111395				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.20.19 18.57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.20.19 18.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.20.19 18.57	
4-Bromofluorobenzene	460-00-4	107	%	70-130	12.20.19 18.57	

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 647240

LT Environmental, Inc.

Nash Unit #38

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111386 — Matrix: Solid — Date Prep: 12.20.19
MB Sample Id: 7693006-1-BLK — LCS Sample Id: 7693006-1-BKS — LCSD Sample Id: 7693006-1-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	243	97	90-110	3	20	mg/kg	12.20.19 13:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111386 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647198-001 — MS Sample Id: 647198-001 S — MSD Sample Id: 647198-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6870	203	7030	79	7000	65	90-110	0	20	mg/kg	12.20.19 14:04	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3111386 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647240-008 — MS Sample Id: 647240-008 S — MSD Sample Id: 647240-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5930	246	6240	126	6240	125	90-110	0	20	mg/kg	12.20.19 15:25	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111438 — Matrix: Solid — Date Prep: 12.20.19
MB Sample Id: 7693003-1-BLK — LCS Sample Id: 7693003-1-BKS — LCSD Sample Id: 7693003-1-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	927	93	832	83	70-135	11	35	mg/kg	12.20.19 12:25	
Diesel Range Organics (DRO)	<50.0	1000	790	79	890	89	70-135	12	35	mg/kg	12.20.19 12:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		114		110		70-135	%	12.20.19 12:25
o-Terphenyl	120		106		95		70-135	%	12.20.19 12:25

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111438 — Matrix: Solid — Date Prep: 12.20.19
MB Sample Id: 7693003-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.20.19 12:05	

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 647240

LT Environmental, Inc.

Nash Unit #38

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3111438 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647198-001 — MS Sample Id: 647198-001 S — MSD Sample Id: 647198-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	830	83	964	96	70-135	15	35	mg/kg	12.20.19 12:45	
Diesel Range Organics (DRO)	<49.9	997	693	70	817	82	70-135	16	35	mg/kg	12.20.19 12:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		90		70-135	%	12.20.19 12:45
o-Terphenyl	71		79		70-135	%	12.20.19 12:45

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111395 — Matrix: Solid — Date Prep: 12.20.19
MB Sample Id: 7693012-1-BLK — LCS Sample Id: 7693012-1-BKS — LCSD Sample Id: 7693012-1-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	0.0990	99	0.105	105	70-130	6	35	mg/kg	12.20.19 12:52	
Toluene	<0.00200	0.100	0.100	100	0.107	107	70-130	7	35	mg/kg	12.20.19 12:52	
Ethylbenzene	<0.00200	0.100	0.0999	100	0.106	106	71-129	6	35	mg/kg	12.20.19 12:52	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.220	110	70-135	6	35	mg/kg	12.20.19 12:52	
o-Xylene	<0.00200	0.100	0.101	101	0.107	107	71-133	6	35	mg/kg	12.20.19 12:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		101		70-130	%	12.20.19 12:52
4-Bromofluorobenzene	100		102		105		70-130	%	12.20.19 12:52

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3111395 — Matrix: Soil — Date Prep: 12.20.19
Parent Sample Id: 647198-001 — MS Sample Id: 647198-001 S — MSD Sample Id: 647198-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0968	96	0.0981	97	70-130	1	35	mg/kg	12.20.19 13:27	
Toluene	<0.00202	0.101	0.0952	94	0.0967	96	70-130	2	35	mg/kg	12.20.19 13:27	
Ethylbenzene	<0.00202	0.101	0.0892	88	0.0910	90	71-129	2	35	mg/kg	12.20.19 13:27	
m,p-Xylenes	<0.000760	0.202	0.184	91	0.188	94	70-135	2	35	mg/kg	12.20.19 13:27	
o-Xylene	<0.00202	0.101	0.0906	90	0.0919	91	71-133	1	35	mg/kg	12.20.19 13:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	12.20.19 13:27
4-Bromofluorobenzene	99		98		70-130	%	12.20.19 13:27

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: 647240

XENCO LABORATORIES

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

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Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849 Email:	slo@ltenv.com, dmoir@ltenv.com	

Work Order Comments

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

Project Name:	Nash Unit #38	Turn Around	
Project Number:	012917040	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	2.2	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	10

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	12.19.19	930	1'	1	X	X	X
PH01A			950	3'				
PH02			1000	1'				
PH02A			1020	3'				
PH03			1030	1'				
PH03A			1050	3'				
PH04			1100	1'				
PH04A			1120	3'				
PH05			1130	1'				
PH05A			1150	3'				

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			12/20/19 10:50 AM	2		12/20/19 11:03
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Analytical Report 642404

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash 38

012917040

26-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

26-FEB-20

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

Reference: XENCO Report No(s): **642404**
Nash 38
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) 642404. 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. 642404 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH06	S	11-06-19 13:08	0.5 ft	642404-001
PH06A	S	11-06-19 13:18	3 ft	642404-002
PH07	S	11-06-19 14:21	0.5 ft	642404-003
PH07A	S	11-06-19 14:29	3 ft	642404-004
PH08	S	11-06-19 14:54	0.5 ft	642404-005
PH08A	S	11-06-19 16:05	8 ft	642404-006

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Nash 38

Project ID: *012917040*
Work Order Number(s): *642404*

Report Date: *26-FEB-20*
Date Received: *11/07/2019*

Sample receipt non conformances and comments:

V1.001 - Revision (per client email) JK 02/26/20
PH06B to PH06A
PH07B to PH07A
PH08E to PH08A

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3106794 Chloride by EPA 300
Lab Sample ID 642404-005 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 642404-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3106830 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3106866 TPH by SW8015 Mod
Surrogate 1-Chlorooctane recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7689850-1-BKS,642401-001 SD.

Certificate of Analysis Summary 642404

LT Environmental, Inc., Arvada, CO

Project Name: Nash 38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Nov-07-19 08:20 am
Report Date: 26-FEB-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	642404-001		642404-002		642404-003		642404-004		642404-005		642404-006	
	Field Id:	PH06		PH06A		PH07		PH07A		PH08		PH08A	
	Depth:	0.5- ft		3- ft		0.5- ft		3- ft		0.5- ft		8- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-06-19 13:08		Nov-06-19 13:18		Nov-06-19 14:21		Nov-06-19 14:29		Nov-06-19 14:54		Nov-06-19 16:05	
BTEX by EPA 8021B	***Extracted:***	Nov-07-19 09:23		Nov-07-19 09:23		Nov-07-19 09:23		Nov-07-19 09:23		Nov-07-19 09:23		Nov-07-19 09:23	
	Analyzed:	Nov-07-19 14:47		Nov-07-19 15:06		Nov-07-19 15:25		Nov-07-19 15:44		Nov-07-19 19:46		Nov-07-19 20:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
Toluene		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
Ethylbenzene		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
m,p-Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00198	0.00198
o-Xylene		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
Total Xylenes		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
Total BTEX		<0.000998	0.000998	<0.000994	0.000994	<0.000998	0.000998	<0.00100	0.00100	<0.000998	0.000998	<0.000990	0.000990
Chloride by EPA 300	***Extracted:***	Nov-07-19 10:11		Nov-07-19 10:11		Nov-07-19 10:11		Nov-07-19 10:11		Nov-07-19 10:11		Nov-07-19 10:11	
	Analyzed:	Nov-07-19 12:58		Nov-07-19 13:04		Nov-07-19 13:10		Nov-07-19 13:16		Nov-07-19 13:22		Nov-07-19 13:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		5480	497	6050	499	573	494	97.0	50.4	13300	507	1030	497
TPH by SW8015 Mod	***Extracted:***	Nov-07-19 13:00		Nov-07-19 13:00		Nov-07-19 13:00		Nov-07-19 13:00		Nov-07-19 13:00		Nov-07-19 13:00	
	Analyzed:	Nov-07-19 18:01		Nov-07-19 18:20		Nov-07-19 18:40		Nov-07-19 18:59		Nov-07-19 19:39		Nov-07-19 19:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.1	50.1	<50.2	50.2
Diesel Range Organics (DRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.1	50.1	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.1	50.1	<50.2	50.2
Total GRO-DRO		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.1	50.1	<50.2	50.2
Total TPH		<50.2	50.2	<50.2	50.2	<50.2	50.2	<50.0	50.0	<50.1	50.1	<50.2	50.2

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-001	Date Collected:	11.06.19 13.08	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 10.11	Basis:	Wet Weight
Seq Number:	3106794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5480**	497	mg/kg	11.07.19 12.58		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.07.19 13.00	Basis:	Wet Weight
Seq Number:	3106866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.07.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.07.19 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.07.19 18.01	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.07.19 18.01	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.07.19 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	11.07.19 18.01	
o-Terphenyl	84-15-1	114	%	70-135	11.07.19 18.01	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-001	Date Collected:	11.06.19 13.08	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 14.47	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.07.19 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.07.19 14.47	
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.07.19 14.47	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-002	Date Collected:	11.06.19 13.18	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 10.11	Basis:	Wet Weight
Seq Number:	3106794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6050**	499	mg/kg	11.07.19 13.04		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.07.19 13.00	Basis:	Wet Weight
Seq Number:	3106866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.07.19 18.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.07.19 18.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.07.19 18.20	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.07.19 18.20	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.07.19 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	11.07.19 18.20	
o-Terphenyl	84-15-1	105	%	70-135	11.07.19 18.20	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-002	Date Collected:	11.06.19 13.18	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	11.07.19 15.06	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1
Total BTEX		<0.000994	0.000994	mg/kg	11.07.19 15.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	11.07.19 15.06	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.07.19 15.06	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-003	Date Collected:	11.06.19 14.21	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 10.11	Basis:	Wet Weight
Seq Number:	3106794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**573**	494	mg/kg	11.07.19 13.10		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.07.19 13.00	Basis:	Wet Weight
Seq Number:	3106866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.07.19 18.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.07.19 18.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.07.19 18.40	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.07.19 18.40	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.07.19 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	11.07.19 18.40	
o-Terphenyl	84-15-1	112	%	70-135	11.07.19 18.40	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-003	Date Collected:	11.06.19 14.21	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 15.25	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.07.19 15.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	11.07.19 15.25	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.07.19 15.25	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-004	Date Collected:	11.06.19 14.29	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 10.11	Basis:	Wet Weight
Seq Number:	3106794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.0**	50.4	mg/kg	11.07.19 13.16		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.07.19 13.00	Basis:	Wet Weight
Seq Number:	3106866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.07.19 18.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.07.19 18.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.07.19 18.59	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.07.19 18.59	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.07.19 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	11.07.19 18.59	
o-Terphenyl	84-15-1	108	%	70-135	11.07.19 18.59	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-004	Date Collected:	11.06.19 14.29	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	11.07.19 15.44	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1
Total BTEX		<0.00100	0.00100	mg/kg	11.07.19 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	11.07.19 15.44	
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.07.19 15.44	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id: **PH08** Matrix: Soil Date Received:11.07.19 08.20
Lab Sample Id: 642404-005 Date Collected: 11.06.19 14.54 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 11.07.19 10.11 Basis: Wet Weight
Seq Number: 3106794

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13300**	507	mg/kg	11.07.19 13.22		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 11.07.19 13.00 Basis: Wet Weight
Seq Number: 3106866

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.07.19 19.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.07.19 19.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.07.19 19.39	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.07.19 19.39	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.07.19 19.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.07.19 19.39	
o-Terphenyl	84-15-1	110	%	70-135	11.07.19 19.39	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-005	Date Collected:	11.06.19 14.54	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	11.07.19 19.46	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1
Total BTEX		<0.000998	0.000998	mg/kg	11.07.19 19.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	11.07.19 19.46	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.07.19 19.46	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-006	Date Collected:	11.06.19 16.05	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 10.11	Basis:	Wet Weight
Seq Number:	3106794				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	497	mg/kg	11.07.19 13.40		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.07.19 13.00	Basis:	Wet Weight
Seq Number:	3106866				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.07.19 19.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.07.19 19.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.07.19 19.58	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.07.19 19.58	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.07.19 19.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	11.07.19 19.58	
o-Terphenyl	84-15-1	110	%	70-135	11.07.19 19.58	

Certificate of Analytical Results 642404

LT Environmental, Inc., Arvada, CO

Nash 38

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	11.07.19 08.20
Lab Sample Id:	642404-006	Date Collected:	11.06.19 16.05	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.07.19 09.23	Basis:	Wet Weight
Seq Number:	3106830				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	11.07.19 20.05	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1
Total BTEX		<0.000990	0.000990	mg/kg	11.07.19 20.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	11.07.19 20.05	
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.07.19 20.05	

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 642404

LT Environmental, Inc.

Nash 38

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106794 — Matrix: Solid — Date Prep: 11.07.19
MB Sample Id: 7689788-1-BLK — LCS Sample Id: 7689788-1-BKS — LCSD Sample Id: 7689788-1-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	270	108	268	107	90-110	1	20	mg/kg	11.07.19 11:05	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106794 — Matrix: Soil — Date Prep: 11.07.19
Parent Sample Id: 642401-001 — MS Sample Id: 642401-001 S — MSD Sample Id: 642401-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	50.4	202	278	113	273	111	90-110	2	20	mg/kg	11.07.19 12:05	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3106794 — Matrix: Soil — Date Prep: 11.07.19
Parent Sample Id: 642404-005 — MS Sample Id: 642404-005 S — MSD Sample Id: 642404-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13300	10200	26500	129	25800	127	90-110	3	20	mg/kg	11.07.19 13:28	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3106866 — Matrix: Solid — Date Prep: 11.07.19
MB Sample Id: 7689850-1-BLK — LCS Sample Id: 7689850-1-BKS — LCSD Sample Id: 7689850-1-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	925	93	912	91	70-135	1	35	mg/kg	11.07.19 14:44	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	990	99	70-135	2	35	mg/kg	11.07.19 14:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		137	**	133		70-135	%	11.07.19 14:44
o-Terphenyl	116		120		119		70-135	%	11.07.19 14:44

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3106866 — Matrix: Solid — Date Prep: 11.07.19
MB Sample Id: 7689850-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.07.19 14:25	

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

QC Summary 642404

LT Environmental, Inc.

Nash 38

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3106866 — Matrix: Soil — Date Prep: 11.07.19
Parent Sample Id: 642401-001 — MS Sample Id: 642401-001 S — MSD Sample Id: 642401-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	963	96	975	98	70-135	1	35	mg/kg	11.07.19 15:44	
Diesel Range Organics (DRO)	<50.0	1000	1060	106	1050	105	70-135	1	35	mg/kg	11.07.19 15:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		143	**	70-135	%	11.07.19 15:44
o-Terphenyl	128		126		70-135	%	11.07.19 15:44

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3106830 — Matrix: Solid — Date Prep: 11.07.19
MB Sample Id: 7689857-1-BLK — LCS Sample Id: 7689857-1-BKS — LCSD Sample Id: 7689857-1-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	0.0935	94	0.0893	89	70-130	5	35	mg/kg	11.07.19 10:46	
Toluene	<0.00100	0.100	0.0932	93	0.0908	91	70-130	3	35	mg/kg	11.07.19 10:46	
Ethylbenzene	<0.00100	0.100	0.0928	93	0.0896	90	71-129	4	35	mg/kg	11.07.19 10:46	
m,p-Xylenes	<0.00200	0.200	0.198	99	0.192	96	70-135	3	35	mg/kg	11.07.19 10:46	
o-Xylene	<0.00100	0.100	0.0993	99	0.0965	97	71-133	3	35	mg/kg	11.07.19 10:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		102		70-130	%	11.07.19 10:46
4-Bromofluorobenzene	93		112		115		70-130	%	11.07.19 10:46

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3106830 — Matrix: Soil — Date Prep: 11.07.19
Parent Sample Id: 642401-001 — MS Sample Id: 642401-001 S — MSD Sample Id: 642401-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000998	0.0998	0.0835	84	0.0954	95	70-130	13	35	mg/kg	11.07.19 20:25	
Toluene	<0.000998	0.0998	0.0863	86	0.101	101	70-130	16	35	mg/kg	11.07.19 20:25	
Ethylbenzene	<0.000998	0.0998	0.0826	83	0.0943	94	71-129	13	35	mg/kg	11.07.19 20:25	
m,p-Xylenes	<0.00200	0.200	0.174	87	0.201	101	70-135	14	35	mg/kg	11.07.19 20:25	
o-Xylene	<0.000998	0.0998	0.0867	87	0.101	101	71-133	15	35	mg/kg	11.07.19 20:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		105		70-130	%	11.07.19 20:25
4-Bromofluorobenzene	111		115		70-130	%	11.07.19 20:25

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

Chain of Custody

Work Order No: 642404

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

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:	ldelval@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 38	Turn Around	
Project Number:	012917040	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	~~Benjamin Belill~~ Luis Del Val	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.5	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	6

ANALYSIS REQUEST

Work Order Notes

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
PH06	S	11/6/2019	1308	0.5'	1	X	X	X	
PH06B			1318	3'					
PH07			1421	0.5'					
PH07B			1429	3'					
PH08			1454	0.5'					
PH08E			1605	8'					

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
		11/7/19 08:20	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/07/2019 08:20:00 AM

Work Order #: 642404

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)?	2.5
#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**
#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: 11/07/2019

Checklist reviewed by: Jessica Kramer Date: 11/08/2019

Jessica Kramer

Analytical Report 647856

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Unit #38

012917040

06-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

06-JAN-20

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

Reference: XENCO Report No(s): **647856**
Nash Unit #38
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) 647856. 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. 647856 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,

Holly Taylor

Holly Taylor
Project Manager

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

Sample Cross Reference 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	01-02-20 09:35	3 ft	647856-001
FS02	S	01-02-20 09:40	3 ft	647856-002
SW01	S	01-02-20 10:35	0 - 3 ft	647856-003
SW02	S	01-02-20 10:45	0 - 3 ft	647856-004
SW03	S	01-02-20 10:55	0 - 3 ft	647856-005
SW04	S	01-02-20 11:05	0 - 3 ft	647856-006
PH01B	S	12-31-19 13:30	4.5 ft	647856-007
PH02B	S	12-31-19 14:00	6 ft	647856-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Unit #38

Project ID: *012917040*
Work Order Number(s): *647856*

Report Date: *06-JAN-20*
Date Received: *01/03/2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3112359 BTEX by EPA 8021B

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

Batch: LBA-3112365 Chloride by EPA 300

Lab Sample ID 647858-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 647856-001, -002, -003, -004, -005, -006, -007, -008.

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

Certificate of Analysis Summary 647856

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Jan-03-20 11:14 am
Report Date: 06-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	647856-001		647856-002		647856-003		647856-004		647856-005		647856-006	
	Field Id:	FS01		FS02		SW01		SW02		SW03		SW04	
	Depth:	3- ft		3- ft		0-3 ft		0-3 ft		0-3 ft		0-3 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-02-20 09:35		Jan-02-20 09:40		Jan-02-20 10:35		Jan-02-20 10:45		Jan-02-20 10:55		Jan-02-20 11:05	
BTEX by EPA 8021B	***Extracted:***	Jan-03-20 12:26		Jan-03-20 12:26		Jan-03-20 12:26		Jan-03-20 12:26		Jan-03-20 12:26		Jan-03-20 12:26	
	Analyzed:	Jan-03-20 15:40		Jan-03-20 15:59		Jan-03-20 16:18		Jan-03-20 16:37		Jan-03-20 16:56		Jan-03-20 17:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00401	0.00401	<0.00399	0.00399	<0.00395	0.00395	<0.00396	0.00396	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Jan-03-20 12:17		Jan-03-20 12:17		Jan-03-20 12:17		Jan-03-20 12:17		Jan-03-20 12:17		Jan-03-20 12:17	
	Analyzed:	Jan-03-20 14:31		Jan-03-20 14:48		Jan-03-20 15:06		Jan-03-20 15:12		Jan-03-20 15:17		Jan-03-20 15:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4790 D	101	4080 D	100	6570	99.8	5000	99.0	7680	99.0	4090	99.4
TPH by SW8015 Mod	***Extracted:***	Jan-03-20 13:00		Jan-03-20 13:00		Jan-03-20 13:00		Jan-03-20 13:00		Jan-03-20 13:00		Jan-03-20 13:00	
	Analyzed:	Jan-03-20 15:33		Jan-03-20 15:53		Jan-03-20 16:13		Jan-03-20 16:13		Jan-03-20 16:33		Jan-03-20 16:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.9	49.9
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.9	49.9
Total GRO-DRO		<50.0	50.0	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.9	49.9
Total TPH		<50.0	50.0	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.2	50.2	<49.9	49.9

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

Holly Taylor
Project Manager

Final 1.000

Certificate of Analysis Summary 647856

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Jan-03-20 11:14 am
Report Date: 06-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	647856-007		647856-008					
	Field Id:	PH01B		PH02B					
	Depth:	4.5- ft		6- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-31-19 13:30		Dec-31-19 14:00					
BTEX by EPA 8021B	***Extracted:***	Jan-03-20 12:26		Jan-03-20 12:26					
	Analyzed:	Jan-03-20 17:34		Jan-03-20 17:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00198	0.00198				
Toluene		<0.00198	0.00198	<0.00198	0.00198				
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198				
m,p-Xylenes		<0.00395	0.00395	<0.00395	0.00395				
o-Xylene		<0.00198	0.00198	<0.00198	0.00198				
Total Xylenes		<0.00198	0.00198	<0.00198	0.00198				
Total BTEX		<0.00198	0.00198	<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	Jan-03-20 12:17		Jan-03-20 12:17					
	Analyzed:	Jan-03-20 15:40		Jan-03-20 15:46					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		2060	99.6	1210	99.8				
TPH by SW8015 Mod	***Extracted:***	Jan-03-20 13:00		Jan-03-20 13:00					
	Analyzed:	Jan-03-20 16:54		Jan-03-20 16:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.1	50.1				
Diesel Range Organics (DRO)		<50.3	50.3	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1				
Total GRO-DRO		<50.3	50.3	<50.1	50.1				
Total TPH		<50.3	50.3	<50.1	50.1				

Holly Taylor
Project Manager

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-001	Date Collected:	01.02.20 09.35	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4790**	101	mg/kg	01.03.20 18.40	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.03.20 15.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.03.20 15.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.03.20 15.33	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.03.20 15.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.03.20 15.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	01.03.20 15.33	
o-Terphenyl	84-15-1	110	%	70-135	01.03.20 15.33	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-001	Date Collected:	01.02.20 09.35	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.03.20 15.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.20 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	01.03.20 15.40	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.03.20 15.40	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-002	Date Collected:	01.02.20 09.40	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4080**	100	mg/kg	01.03.20 15.00	D	10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.03.20 15.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.03.20 15.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.03.20 15.53	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.03.20 15.53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.03.20 15.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.03.20 15.53	
o-Terphenyl	84-15-1	110	%	70-135	01.03.20 15.53	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-002	Date Collected:	01.02.20 09.40	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.03.20 15.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.20 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	01.03.20 15.59	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.03.20 15.59	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-003	Date Collected:	01.02.20 10.35	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6570**	99.8	mg/kg	01.03.20 15.06		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.03.20 16.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.03.20 16.13	
o-Terphenyl	84-15-1	108	%	70-135	01.03.20 16.13	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-003	Date Collected:	01.02.20 10.35	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.03.20 16.18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.03.20 16.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.03.20 16.18	
4-Bromofluorobenzene	460-00-4	112	%	70-130	01.03.20 16.18	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-004	Date Collected:	01.02.20 10.45	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5000**	99.0	mg/kg	01.03.20 15.12		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.03.20 16.13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.03.20 16.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.03.20 16.13	
o-Terphenyl	84-15-1	109	%	70-135	01.03.20 16.13	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-004	Date Collected:	01.02.20 10.45	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	01.03.20 16.37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.03.20 16.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.03.20 16.37	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.03.20 16.37	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-005	Date Collected:	01.02.20 10.55	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7680**	99.0	mg/kg	01.03.20 15.17		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.03.20 16.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.03.20 16.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.03.20 16.33	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.03.20 16.33	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.03.20 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.03.20 16.33	
o-Terphenyl	84-15-1	111	%	70-135	01.03.20 16.33	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-005	Date Collected:	01.02.20 10.55	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.03.20 16.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.03.20 16.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.03.20 16.56	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.03.20 16.56	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-006	Date Collected:	01.02.20 11.05	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4090**	99.4	mg/kg	01.03.20 15.35		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.03.20 16.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.03.20 16.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.03.20 16.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.03.20 16.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.03.20 16.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	01.03.20 16.33	
o-Terphenyl	84-15-1	104	%	70-135	01.03.20 16.33	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-006	Date Collected:	01.02.20 11.05	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.20 17.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.20 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.03.20 17.15	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.03.20 17.15	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-007	Date Collected:	12.31.19 13.30	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2060**	99.6	mg/kg	01.03.20 15.40		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	01.03.20 16.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	01.03.20 16.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.03.20 16.54	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	01.03.20 16.54	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.03.20 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	01.03.20 16.54	
o-Terphenyl	84-15-1	110	%	70-135	01.03.20 16.54	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-007	Date Collected:	12.31.19 13.30	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	01.03.20 17.34	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.03.20 17.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.03.20 17.34	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.03.20 17.34	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-008	Date Collected:	12.31.19 14.00	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.17	Basis:	Wet Weight
Seq Number:	3112365				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1210**	99.8	mg/kg	01.03.20 15.46		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.03.20 13.00	Basis:	Wet Weight
Seq Number:	3112379				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.03.20 16.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.03.20 16.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.03.20 16.54	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.03.20 16.54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.03.20 16.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	01.03.20 16.54	
o-Terphenyl	84-15-1	106	%	70-135	01.03.20 16.54	

Certificate of Analytical Results 647856

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	01.03.20 11.14
Lab Sample Id:	647856-008	Date Collected:	12.31.19 14.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.03.20 12.26	Basis:	Wet Weight
Seq Number:	3112359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	01.03.20 17.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.03.20 17.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.03.20 17.54	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.03.20 17.54	

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.

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 647856

LT Environmental, Inc.

Nash Unit #38

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112365 — Matrix: Solid — Date Prep: 01.03.20
MB Sample Id: 7693684-1-BLK — LCS Sample Id: 7693684-1-BKS — LCSD Sample Id: 7693684-1-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	230	92	247	99	90-110	7	20	mg/kg	01.03.20 14:20	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112365 — Matrix: Soil — Date Prep: 01.03.20
Parent Sample Id: 647856-001 — MS Sample Id: 647856-001 S — MSD Sample Id: 647856-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4790	202	5060	134	5060	134	90-110	0	20	mg/kg	01.03.20 14:37	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112365 — Matrix: Soil — Date Prep: 01.03.20
Parent Sample Id: 647858-003 — MS Sample Id: 647858-003 S — MSD Sample Id: 647858-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	845	200	1060	108	1060	108	90-110	0	20	mg/kg	01.03.20 16:09	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112379 — Matrix: Solid — Date Prep: 01.03.20
MB Sample Id: 7693693-1-BLK — LCS Sample Id: 7693693-1-BKS — LCSD Sample Id: 7693693-1-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	1170	117	1070	107	70-135	9	35	mg/kg	01.03.20 15:13	
Diesel Range Organics (DRO)	<50.0	1000	1290	129	1190	119	70-135	8	35	mg/kg	01.03.20 15:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		124		121		70-135	%	01.03.20 15:13
o-Terphenyl	108		119		114		70-135	%	01.03.20 15:13

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112379 — Matrix: Solid — Date Prep: 01.03.20
MB Sample Id: 7693693-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.03.20 14:53	

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 647856

LT Environmental, Inc.

Nash Unit #38

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3112379 | Matrix: Soil | Date Prep: 01.03.20
Parent Sample Id: 647856-001 | MS Sample Id: 647856-001 S | MSD Sample Id: 647856-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1120	112	1160	116	70-135	4	35	mg/kg	01.03.20 15:33	
Diesel Range Organics (DRO)	<50.0	1000	1230	123	1280	128	70-135	4	35	mg/kg	01.03.20 15:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		124		70-135	%	01.03.20 15:33
o-Terphenyl	118		119		70-135	%	01.03.20 15:33

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112359 | Matrix: Solid | Date Prep: 01.03.20
MB Sample Id: 7693687-1-BLK | LCS Sample Id: 7693687-1-BKS | LCSD Sample Id: 7693687-1-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	0.110	110	0.111	111	70-130	1	35	mg/kg	01.03.20 13:57	
Toluene	<0.00200	0.100	0.107	107	0.109	109	70-130	2	35	mg/kg	01.03.20 13:57	
Ethylbenzene	<0.00200	0.100	0.107	107	0.110	110	71-129	3	35	mg/kg	01.03.20 13:57	
m,p-Xylenes	<0.00400	0.200	0.215	108	0.221	111	70-135	3	35	mg/kg	01.03.20 13:57	
o-Xylene	<0.00200	0.100	0.108	108	0.112	112	71-133	4	35	mg/kg	01.03.20 13:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		105		103		70-130	%	01.03.20 13:57
4-Bromofluorobenzene	101		107		107		70-130	%	01.03.20 13:57

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112359 | Matrix: Soil | Date Prep: 01.03.20
Parent Sample Id: 647856-001 | MS Sample Id: 647856-001 S | MSD Sample Id: 647856-001 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	0.0990	99	0.116	116	70-130	16	35	mg/kg	01.03.20 14:36	
Toluene	<0.00200	0.100	0.0974	97	0.112	112	70-130	14	35	mg/kg	01.03.20 14:36	
Ethylbenzene	<0.00200	0.100	0.0971	97	0.110	110	71-129	12	35	mg/kg	01.03.20 14:36	
m,p-Xylenes	<0.00401	0.200	0.195	98	0.218	109	70-135	11	35	mg/kg	01.03.20 14:36	
o-Xylene	<0.00200	0.100	0.0974	97	0.111	111	71-133	13	35	mg/kg	01.03.20 14:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		70-130	%	01.03.20 14:36
4-Bromofluorobenzene	111		110		70-130	%	01.03.20 14:36

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: 647856

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 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Unit #38	Turn Around	
Project Number:	012917040	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	2.2	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	1.2.20	935	3'	1	X	X	X
FS02	S	1.2.20	940	3'	1	X	X	X
SW01	S	1.2.20	1035	0-3'	1	X	X	X
SW02	S	1.2.20	1045	0-3'	1	X	X	X
SW03	S	1.2.20	1055	0-3'	1	X	X	X
SW04	S	1.2.20	1105	0-3'	1	X	X	X
PH01B	S	12.31.19	1330	4.5'	1	X	X	X
PH02B	S	12.31.19	1400	2'	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

ice: 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
ervice. 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
enco. 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
Spencer Lo	Edith Mat	1/3/20 @1106	2 Edith Mat		1/3/20 11:14
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01/03/2020 11:14:00 AM

Work Order #: 647856

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)?	2.2
#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**
#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: 01/03/2020

Checklist reviewed by: Holly Taylor Date: 01/06/2020

Analytical Report 653326

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Unit #38

012917040

26-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

26-FEB-20

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

Reference: XENCO Report No(s): **653326**
Nash Unit #38
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) 653326. 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. 653326 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG01	S	02-20-20 09:55	0.5 ft	653326-001
BG01A	S	02-20-20 10:15	2 ft	653326-002
BG01B	S	02-20-20 10:30	4 ft	653326-003

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Unit #38

Project ID: *012917040*
Work Order Number(s): *653326*

Report Date: *26-FEB-20*
Date Received: *02/21/2020*

Sample receipt non conformances and comments:

V1.001 - Revision Corrected sample names from BH01 to BG01. (client email) JK 02/26/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117367 BTEX by EPA 8021B

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

Certificate of Analysis Summary 653326

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Feb-21-20 01:45 pm
Report Date: 26-FEB-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	653326-001		653326-002		653326-003				
	Field Id:	BG01		BG01A		BG01B				
	Depth:	0.5- ft		2- ft		4- ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Feb-20-20 09:55		Feb-20-20 10:15		Feb-20-20 10:30				
BTEX by EPA 8021B	***Extracted:***	Feb-21-20 17:00		Feb-21-20 17:00		Feb-21-20 17:00				
	Analyzed:	Feb-21-20 22:13		Feb-21-20 22:33		Feb-21-20 22:54				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00398	0.00398			
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199			
Chloride by EPA 300	***Extracted:***	Feb-21-20 18:11		Feb-21-20 18:11		Feb-21-20 18:11				
	Analyzed:	Feb-21-20 23:06		Feb-21-20 23:12		Feb-21-20 23:18				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		19000	249	3600	49.8	5370	49.9			
TPH by SW8015 Mod	***Extracted:***	Feb-21-20 17:30		Feb-21-20 17:30		Feb-21-20 17:30				
	Analyzed:	Feb-22-20 08:13		Feb-22-20 08:32		Feb-22-20 08:32				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9			
Diesel Range Organics (DRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9			
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9			
Total GRO-DRO		<50.0	50.0	<50.1	50.1	<49.9	49.9			
Total TPH		<50.0	50.0	<50.1	50.1	<49.9	49.9			

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-001	Date Collected:	02.20.20 09.55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 18.11	Basis:	Wet Weight
Seq Number:	3117384				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19000**	249	mg/kg	02.21.20 23.06		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.21.20 17.30	Basis:	Wet Weight
Seq Number:	3117413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	02.22.20 08.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	02.22.20 08.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	02.22.20 08.13	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	02.22.20 08.13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	02.22.20 08.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	02.22.20 08.13	
o-Terphenyl	84-15-1	114	%	70-135	02.22.20 08.13	

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-001	Date Collected:	02.20.20 09.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 17.00	Basis:	Wet Weight
Seq Number:	3117367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.21.20 22.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.20 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	02.21.20 22.13	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.20 22.13	

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01A**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-002	Date Collected:	02.20.20 10.15	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 18.11	Basis:	Wet Weight
Seq Number:	3117384				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3600**	49.8	mg/kg	02.21.20 23.12		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.21.20 17.30	Basis:	Wet Weight
Seq Number:	3117413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.22.20 08.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.22.20 08.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.22.20 08.32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.22.20 08.32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.22.20 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.22.20 08.32	
o-Terphenyl	84-15-1	108	%	70-135	02.22.20 08.32	

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01A**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-002	Date Collected:	02.20.20 10.15	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 17.00	Basis:	Wet Weight
Seq Number:	3117367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.21.20 22.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.21.20 22.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	02.21.20 22.33	
1,4-Difluorobenzene	540-36-3	105	%	70-130	02.21.20 22.33	

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01B**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-003	Date Collected:	02.20.20 10.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 18.11	Basis:	Wet Weight
Seq Number:	3117384				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5370**	49.9	mg/kg	02.21.20 23.18		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.21.20 17.30	Basis:	Wet Weight
Seq Number:	3117413				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	02.22.20 08.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	02.22.20 08.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	02.22.20 08.32	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	02.22.20 08.32	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	02.22.20 08.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	02.22.20 08.32	
o-Terphenyl	84-15-1	114	%	70-135	02.22.20 08.32	

Certificate of Analytical Results 653326

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01B**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653326-003	Date Collected:	02.20.20 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 17.00	Basis:	Wet Weight
Seq Number:	3117367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	02.21.20 22.54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	02.21.20 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.21.20 22.54	
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.21.20 22.54	

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.

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 653326

LT Environmental, Inc.

Nash Unit #38

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697232-1-BLK — LCS Sample Id: 7697232-1-BKS — LCSD Sample Id: 7697232-1-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	257	103	258	103	90-110	0	20	mg/kg	02.21.20 21:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Soil — Date Prep: 02.21.20
Parent Sample Id: 653326-003 — MS Sample Id: 653326-003 S — MSD Sample Id: 653326-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5370	201	5560	95	5560	95	90-110	0	20	mg/kg	02.21.20 23:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Soil — Date Prep: 02.21.20
Parent Sample Id: 653332-001 — MS Sample Id: 653332-001 S — MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.3	200	255	109	247	105	90-110	3	20	mg/kg	02.21.20 22:05	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117413 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697318-1-BLK — LCS Sample Id: 7697318-1-BKS — LCSD Sample Id: 7697318-1-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	836	84	915	92	70-135	9	35	mg/kg	02.22.20 07:14	
Diesel Range Organics (DRO)	<50.0	1000	917	92	1000	100	70-135	9	35	mg/kg	02.22.20 07:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		122		70-135	%	02.22.20 07:14
o-Terphenyl	116		113		120		70-135	%	02.22.20 07:14

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117413 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697318-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.22.20 06:55	

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

QC Summary 653326

LT Environmental, Inc.

Nash Unit #38

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3117413 | Matrix: Soil | Date Prep: 02.21.20
Parent Sample Id: 653209-013 | MS Sample Id: 653209-013 S | MSD Sample Id: 653209-013 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	963	96	858	86	70-135	12	35	mg/kg	02.22.20 07:34	
Diesel Range Organics (DRO)	<50.2	1000	1050	105	955	96	70-135	9	35	mg/kg	02.22.20 07:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		114		70-135	%	02.22.20 07:34
o-Terphenyl	127		115		70-135	%	02.22.20 07:34

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3117367 | Matrix: Solid | Date Prep: 02.21.20
MB Sample Id: 7697231-1-BLK | LCS Sample Id: 7697231-1-BKS | LCSD Sample Id: 7697231-1-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	0.104	104	0.100	100	70-130	4	35	mg/kg	02.21.20 19:30	
Toluene	<0.00200	0.100	0.101	101	0.0976	98	70-130	3	35	mg/kg	02.21.20 19:30	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0943	94	71-129	3	35	mg/kg	02.21.20 19:30	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.195	98	70-135	3	35	mg/kg	02.21.20 19:30	
o-Xylene	<0.00200	0.100	0.101	101	0.0977	98	71-133	3	35	mg/kg	02.21.20 19:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		104		70-130	%	02.21.20 19:30
4-Bromofluorobenzene	97		93		94		70-130	%	02.21.20 19:30

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3117367 | Matrix: Soil | Date Prep: 02.21.20
Parent Sample Id: 653332-001 | MS Sample Id: 653332-001 S | MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0891	88	0.0848	85	70-130	5	35	mg/kg	02.21.20 20:11	
Toluene	<0.00202	0.101	0.0827	82	0.0788	79	70-130	5	35	mg/kg	02.21.20 20:11	
Ethylbenzene	<0.00202	0.101	0.0816	81	0.0773	77	71-129	5	35	mg/kg	02.21.20 20:11	
m,p-Xylenes	<0.00404	0.202	0.166	82	0.157	79	70-135	6	35	mg/kg	02.21.20 20:11	
o-Xylene	<0.00202	0.101	0.0844	84	0.0799	80	71-133	5	35	mg/kg	02.21.20 20:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.21.20 20:11
4-Bromofluorobenzene	94		95		70-130	%	02.21.20 20:11

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

Chain of Custody

Work Order No: 653324

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

Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, kkennedy@ltenv.com

Work Order Comments

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

Project Name:	Nash Unit #38	Turn Around	
Project Number:	012917040	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.2	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:	3

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01	S	2.20.20	955	0.5'	1	X	X	X
BH01A	S	2.20.20	1015	2'	1	X	X	X
BH01B	S	2.20.20	1030	4'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		2/21/20 1:00 pm	2		2/21/20 13:45
			4		
			6		

Revised Date 051418 Rev. 2018.1

Analytical Report 653329

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Unit #38

012917040

26-FEB-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

26-FEB-20

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

Reference: XENCO Report No(s): **653329**
Nash Unit #38
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) 653329. 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. 653329 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 653329

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG01C	S	02-20-20 10:45	6 ft	653329-001

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Unit #38

Project ID: *012917040*
Work Order Number(s): *653329*

Report Date: *26-FEB-20*
Date Received: *02/21/2020*

Sample receipt non conformances and comments:

V1.001 - Revision Corrected sample 001 name from BH01C to BG01C.(client email) JK 02/26/20

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3117367 BTEX by EPA 8021B

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

Certificate of Analysis Summary 653329

LT Environmental, Inc., Arvada, CO

Project Name: Nash Unit #38

Project Id: 012917040
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Feb-21-20 01:45 pm
Report Date: 26-FEB-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	653329-001					
	Field Id:	BG01C					
	Depth:	6- ft					
	Matrix:	SOIL					
	Sampled:	Feb-20-20 10:45					
BTEX by EPA 8021B	***Extracted:***	Feb-21-20 17:00					
	Analyzed:	Feb-22-20 01:17					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00400	0.00400				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Feb-21-20 18:11					
	Analyzed:	Feb-21-20 23:36					
	Units/RL:	mg/kg	RL				
Chloride		1380	49.9				
TPH by SW8015 Mod	***Extracted:***	Feb-21-20 17:00					
	Analyzed:	Feb-21-20 22:48					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1				
Total GRO-DRO		<50.1	50.1				
Total TPH		<50.1	50.1				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 653329

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01C**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653329-001	Date Collected:	02.20.20 10.45	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 18.11	Basis:	Wet Weight
Seq Number:	3117384				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1380**	49.9	mg/kg	02.21.20 23.36		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	02.21.20 17.00	Basis:	Wet Weight
Seq Number:	3117398				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	02.21.20 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	02.21.20 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	02.21.20 22.48	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	02.21.20 22.48	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	02.21.20 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	02.21.20 22.48	
o-Terphenyl	84-15-1	113	%	70-135	02.21.20 22.48	

Certificate of Analytical Results 653329

LT Environmental, Inc., Arvada, CO

Nash Unit #38

Sample Id:	**BG01C**	Matrix:	Soil	Date Received:	02.21.20 13.45
Lab Sample Id:	653329-001	Date Collected:	02.20.20 10.45	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.21.20 17.00	Basis:	Wet Weight
Seq Number:	3117367				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	02.22.20 01.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.22.20 01.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	02.22.20 01.17	
1,4-Difluorobenzene	540-36-3	104	%	70-130	02.22.20 01.17	

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 653329

LT Environmental, Inc.

Nash Unit #38

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697232-1-BLK — LCS Sample Id: 7697232-1-BKS — LCSD Sample Id: 7697232-1-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	257	103	258	103	90-110	0	20	mg/kg	02.21.20 21:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Soil — Date Prep: 02.21.20
Parent Sample Id: 653326-003 — MS Sample Id: 653326-003 S — MSD Sample Id: 653326-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5370	201	5560	95	5560	95	90-110	0	20	mg/kg	02.21.20 23:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117384 — Matrix: Soil — Date Prep: 02.21.20
Parent Sample Id: 653332-001 — MS Sample Id: 653332-001 S — MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.3	200	255	109	247	105	90-110	3	20	mg/kg	02.21.20 22:05	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117398 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697305-1-BLK — LCS Sample Id: 7697305-1-BKS — LCSD Sample Id: 7697305-1-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	849	85	813	81	70-135	4	35	mg/kg	02.21.20 22:28	
Diesel Range Organics (DRO)	<50.0	1000	995	100	1010	101	70-135	1	35	mg/kg	02.21.20 22:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		112		105		70-135	%	02.21.20 22:28
o-Terphenyl	117		117		106		70-135	%	02.21.20 22:28

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3117398 — Matrix: Solid — Date Prep: 02.21.20
MB Sample Id: 7697305-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.24.20 11:43	

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 653329

LT Environmental, Inc.

Nash Unit #38

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3117398 | Matrix: Soil | Date Prep: 02.21.20
Parent Sample Id: 653329-001 | MS Sample Id: 653329-001 S | MSD Sample Id: 653329-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	928	93	918	91	70-135	1	35	mg/kg	02.21.20 23:07	
Diesel Range Organics (DRO)	<50.2	1000	1120	112	1060	105	70-135	6	35	mg/kg	02.21.20 23:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		123		70-135	%	02.21.20 23:07
o-Terphenyl	126		129		70-135	%	02.21.20 23:07

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3117367 | Matrix: Solid | Date Prep: 02.21.20
MB Sample Id: 7697231-1-BLK | LCS Sample Id: 7697231-1-BKS | LCSD Sample Id: 7697231-1-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	0.104	104	0.100	100	70-130	4	35	mg/kg	02.21.20 19:30	
Toluene	<0.00200	0.100	0.101	101	0.0976	98	70-130	3	35	mg/kg	02.21.20 19:30	
Ethylbenzene	<0.00200	0.100	0.0974	97	0.0943	94	71-129	3	35	mg/kg	02.21.20 19:30	
m,p-Xylenes	<0.00400	0.200	0.201	101	0.195	98	70-135	3	35	mg/kg	02.21.20 19:30	
o-Xylene	<0.00200	0.100	0.101	101	0.0977	98	71-133	3	35	mg/kg	02.21.20 19:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		104		70-130	%	02.21.20 19:30
4-Bromofluorobenzene	97		93		94		70-130	%	02.21.20 19:30

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3117367 | Matrix: Soil | Date Prep: 02.21.20
Parent Sample Id: 653332-001 | MS Sample Id: 653332-001 S | MSD Sample Id: 653332-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0891	88	0.0848	85	70-130	5	35	mg/kg	02.21.20 20:11	
Toluene	<0.00202	0.101	0.0827	82	0.0788	79	70-130	5	35	mg/kg	02.21.20 20:11	
Ethylbenzene	<0.00202	0.101	0.0816	81	0.0773	77	71-129	5	35	mg/kg	02.21.20 20:11	
m,p-Xylenes	<0.00404	0.202	0.166	82	0.157	79	70-135	6	35	mg/kg	02.21.20 20:11	
o-Xylene	<0.00202	0.101	0.0844	84	0.0799	80	71-133	5	35	mg/kg	02.21.20 20:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	02.21.20 20:11
4-Bromofluorobenzene	94		95		70-130	%	02.21.20 20:11

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

Chain of Custody

Work Order No: E93329

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 East Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	slo@ltenv.com, dmoir@ltenv.com, kkennedy@ltenv.com

Work Order Comments

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

Project Name:	Nash Unit #38	Turn Around	
Project Number:	01291704O	Routine ☐	
P.O. Number:		Rush: 24H	
Sampler's Name:	Spencer Lo	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.2	Thermometer ID	TN11007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	1

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01C	S	2.20.20	1045	6'	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
		2/21/20 1:00pm	2		2/21/20 13:45
			4		
			6		

Revised Date 051418 Rev. 2018.1

District I
1625 N. French Dr., Hobbs, NM 88240
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Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 4918

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 4918
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bbillings	Incident closed, but in future it would be better to get approval of background location prior to placement of sample location.	9/15/2021