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	NRM2009841041
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.2888794 Longitude -103.9292603
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Nash Deep East 18-16 SWD Trunk Line	Site Type SWD Trunk Line
Date Release Discovered 03/23/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
L	19	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 198.37	Volume Recovered (bbls) 160
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release	A leak from the produced water line was identified and the line was shut in. A failed connection on a joint was found and repaired. A third party contractor will be retained to complete remediation activities.	

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009841041
District RP	
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? An unauthorized fluid release of an amount greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
By Adrian Baker to Bratcher, Mike, EMNRD; Hamlet, Robert, EMNRD; Venegas, Victoria, EMNRD; 'Griswold, Jim, EMNRD'; rmann@slo.state.nm.us on Monday, March 23, 2020 2:38 PM.

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:

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: 4-3-20

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

OCD Only

Received by: Ramona Marcus Date: 4/7/2020

NRM2009841041

Location:	Nash Deep East 18-16 SWD Trunk Line	
Spill Date:	3/23/2020	

Area 1		
Approximate Area =	49.30	sq. ft.
Average Saturation (or depth) of spill =	72.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	167.90	bbls

Area 2		
Approximate Area =	350.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	3.12	bbls

Area 3		
Approximate Area =	864.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	7.69	bbls

Area 4		
Approximate Area =	178.00	sq. ft.
Average Saturation (or depth) of spill =	12.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	4.76	bbls

Area 5		
Approximate Area =	283.00	sq. ft.
Average Saturation (or depth) of spill =	10.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	6.30	bbls

Area 6		
Approximate Area =	644.00	sq. ft.
Average Saturation (or depth) of spill =	6.00	inches
Average Porosity Factor =	0.15	
VOLUME OF LEAK		
Total Crude Oil =	0.00	bbls
Total Produced Water =	8.60	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**198.37**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**0.00**	**bbls**
Total Produced Water =	**160.00**	**bbls**

Incident ID	NRM2009841041
District RP	
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	NRM2009841041
District RP	
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: 6/18/20

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	NRM2009841041
District RP	
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: Kyle Littrell Date: 6/18/20

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

A proud member of WSP

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

June 18, 2020

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

RE: Closure Request
Nash Deep East 18-16 SWD Trunk Line
Incident Number NRM2009841041
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil removal, and soil sampling activities at the Nash Deep East 18-16 SWD Trunk Line (Site) located in Unit L, Section 19, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to address impacts to soil following a release of produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2009841041.

RELEASE BACKGROUND

On March 23, 2020, a leak from the produced water line was identified. The line was shut in and a failed connection on a joint was found and repaired. The release occurred within an excavation for the installation of a pipeline. Approximately 198.37 barrels (bbls) of produced water were released, of which 160 bbls of produced water were recovered by vacuum truck. XTO immediately reported the release via email to the New Mexico Oil Conservation Division (NMOCD) on April 3, 2020. XTO then submitted a Release Notification and Corrective Action Form C-141 (Form C-141) and was subsequently assigned Incident Number NRM2009841041.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be 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 321717103561001, located approximately 2,236 feet West of the Site. The water well has a depth to groundwater of 50 feet and a total depth that has not been determined. Ground surface elevation at the water well location is 3,034 feet above mean sea level (AMSL), which is approximately 3 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry tributary located approximately

138 feet northeast 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 ACTIVITIES

On April 15 and April 16, 2020, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected five preliminary soil samples (SS01 through SS05) from within the release extent at a depth of approximately 8 feet bgs to assess the lateral extent of impacted soil. The samples were collected on the floor of the pipeline excavation. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.

Preliminary soil samples SS01 though SS05 were collected within the previously excavated pipeline right-of-way (ROW). The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during assessment activities. A photographic log is included in Attachment 1.

The preliminary 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 transported at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on the laboratory analytical results for preliminary soil samples SS01 through SS05 and field screening results; chloride concentrations in the soil exceeded the Closure Criteria. As such, excavation activities appeared to be warranted. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical report is included in Attachment 2.

EXCAVATION ACTIVITIES

From April 17 through May 04, 2020, LTE personnel oversaw excavation of impacted soil in the vicinity of SS01 through SS05, within the pipeline ROW, via hydro vacuum. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride. The final depth of the excavation ranged from 8 feet bgs to 13 feet bgs. Some areas of the floor of the excavation remained at 8 feet bgs due to the presence of bedrock. Those areas were power washed and any runoff was excavated with the hydro vacuum. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW08 were collected from the sidewalls of the excavation from depths ranging from the ground surface to a maximum of 13 feet bgs. Composite soil samples FS01 through FS14 were collected from the floor of the excavation at depths ranging from 8 feet bgs to 13 feet bgs.

From May 13 through May 26, 2020, LTE personnel oversaw excavation of impacted soil in the vicinity of composite soil samples FS04, FS07, and SW03. Laboratory analytical results indicated chloride concentrations in the soil exceeded the Closure Criteria. Following the additional excavation, composite floor samples FS04A/FS04B and FS07A were collected at a depth of 8.5 feet bgs. Composite soil sample SW03 was recollected from the sidewall of the excavation from the ground surface to approximately 8 feet bgs. The excavation soil samples were collected, handled and analyzed as described above, and submitted to Xenco in Carlsbad, New Mexico.

The pipeline ROW excavation extent was approximately 2,897 square feet and approximately 54 cubic yards of impacted soil were removed. Bedrock was encountered at 8 feet bgs throughout the excavation extent with except toward the south, where the excavatoin was extended to 13 feet bgs. The final excavation extent and composite soil sample locations are presented on Figure 3. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

CONCLUSIONS

A total of 160 bbls of produced water were recovered by vacuum truck and approximately 536 cubic yards of impacted soil were excavated from the Site during remediation activities. Impacts to bedrock encountered at the base of the excavation were addressed by power washing Laboratory analytical results indicated benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride

concentrations were compliant with Closure Criteria in all final confirmation soil samples collected from the excavation in the pipeline ROW. As such, XTO respectfully requests NFA for the release associated with Incident Number NRM2009841041.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Fatima Smith
Staff Geologist

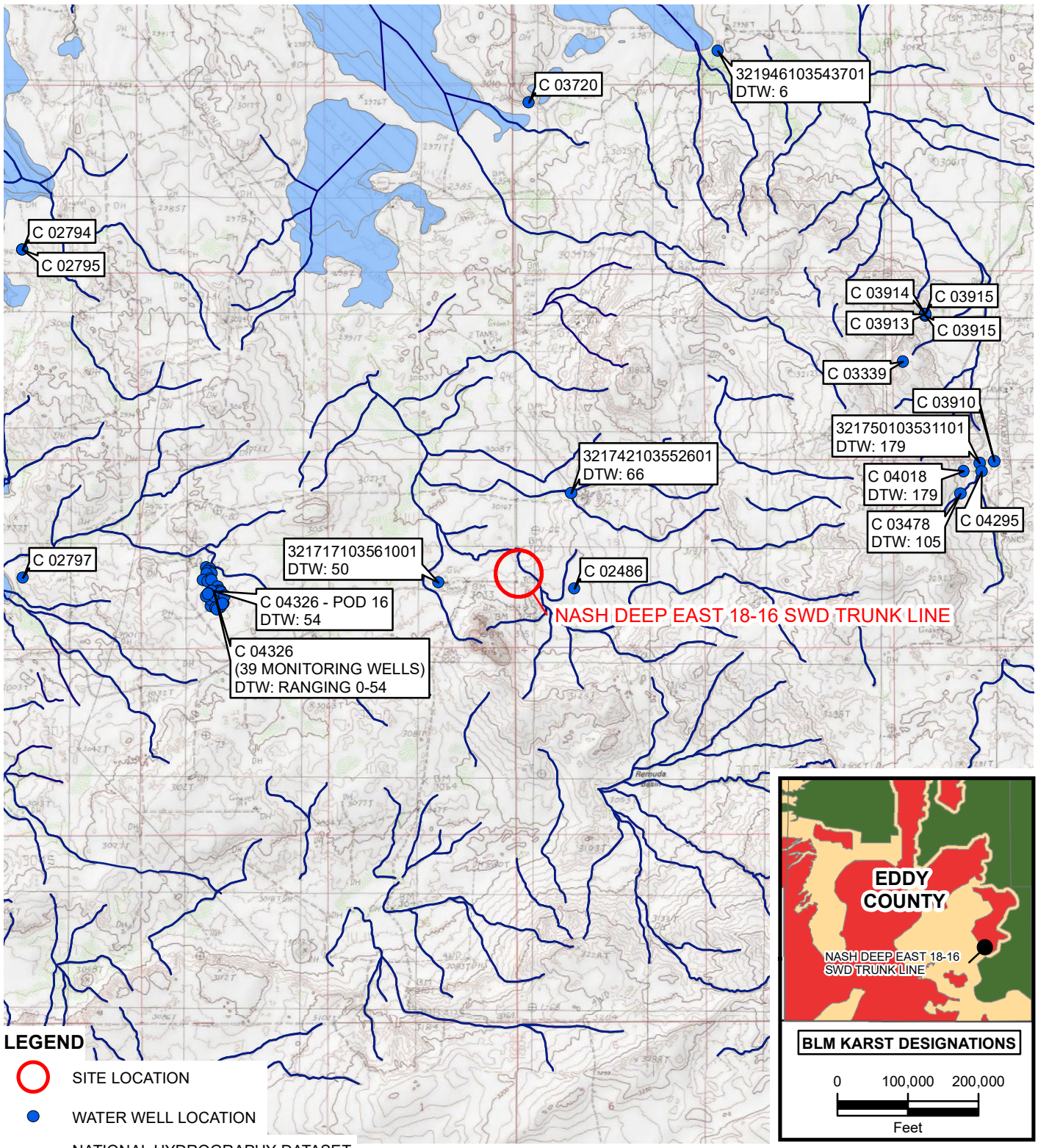
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Jim Amos, BLM
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Reports
Attachment 1	Photographic Log
Attachment 2	Laboratory Analytical Reports

FIGURES



NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
NASH DEEP EAST 18-16 SWD TRUNK LINE
UNIT L SEC 19 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920043_NASH DEEP EAST 18\012920043_FIG01_SL_2020.mxd

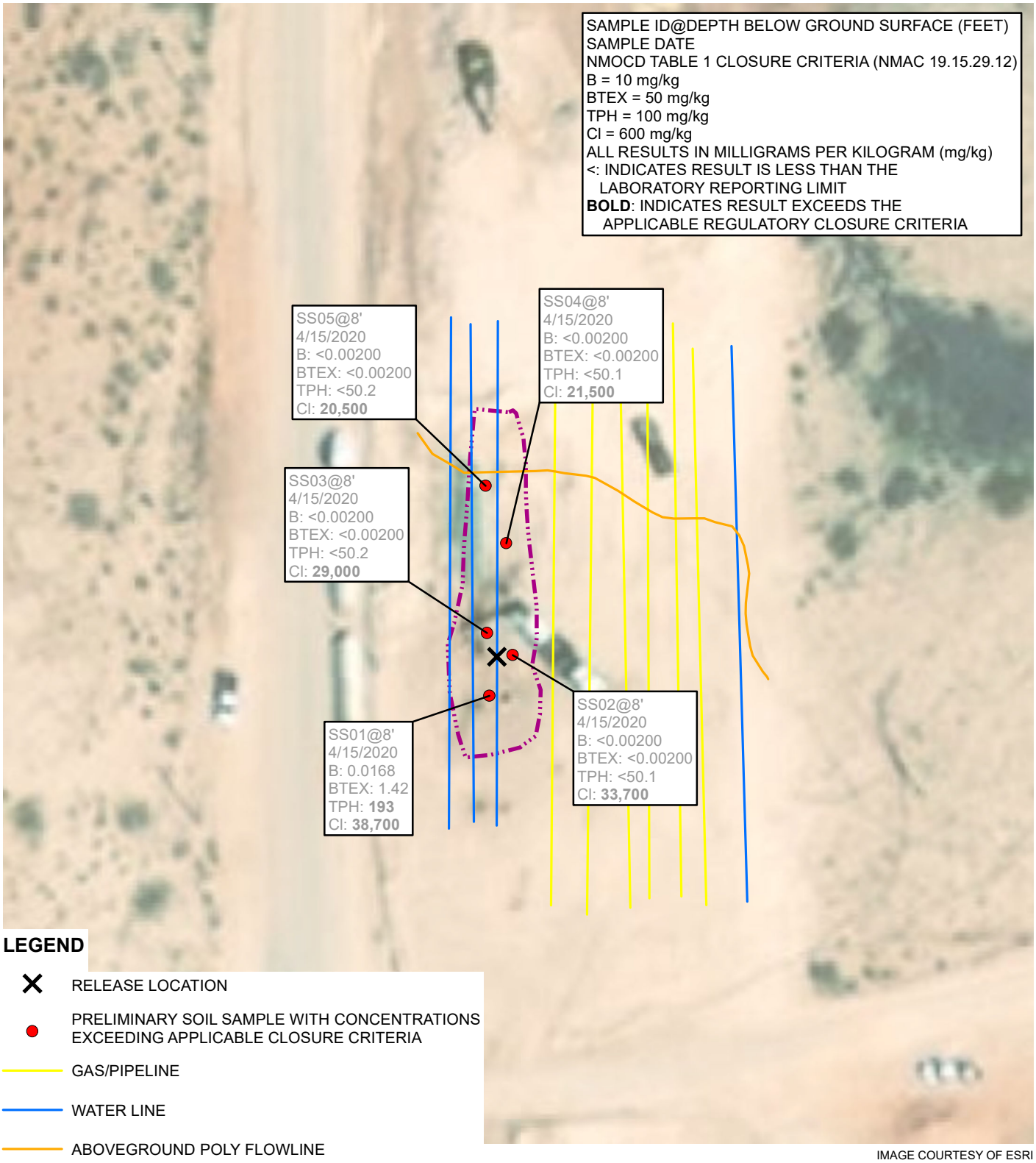
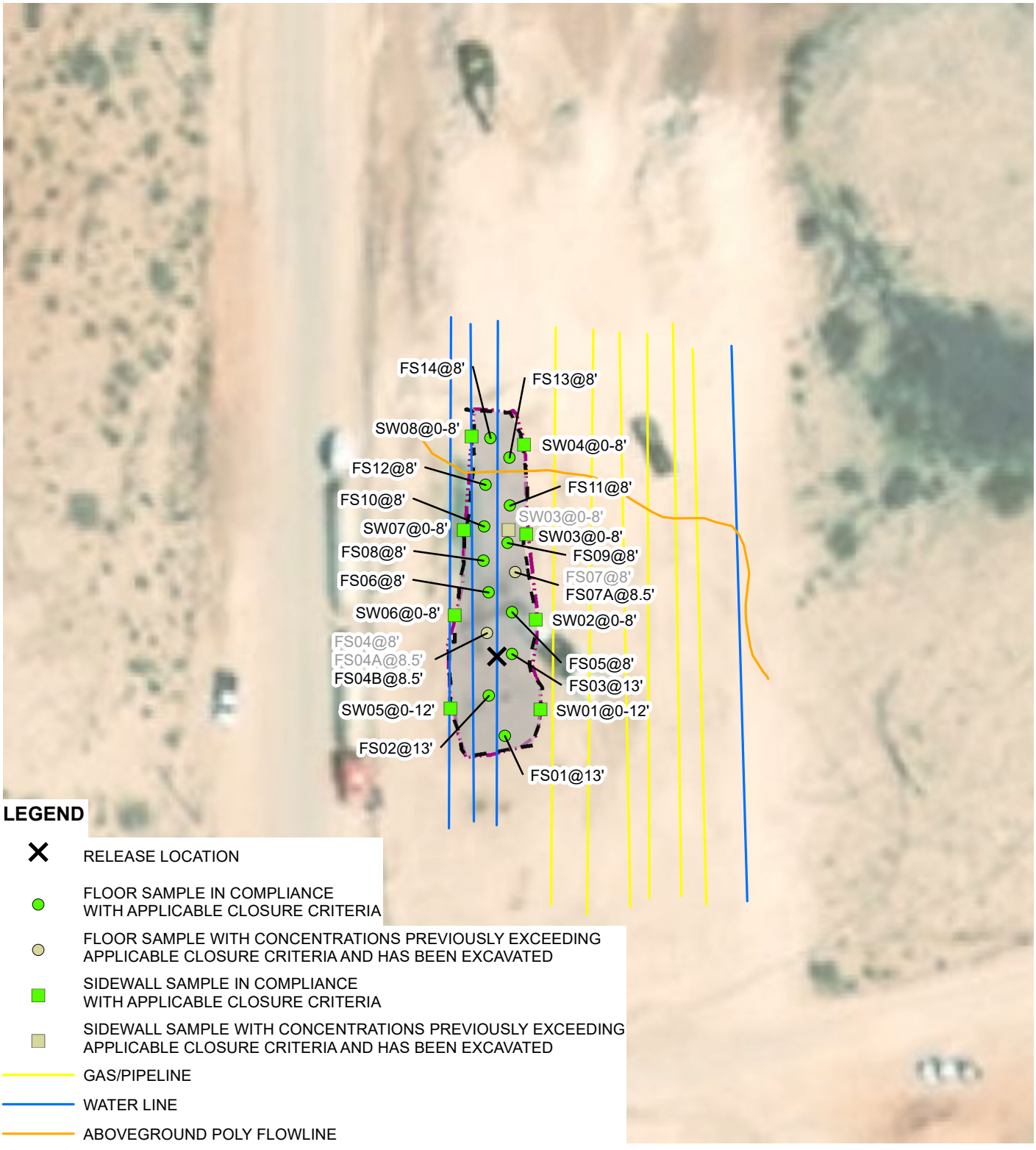


FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
NASH DEEP EAST 18-16 SWD TRUNK LINE
UNIT L SEC 19 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920043_NASH DEEP EAST 18\012920043_FIG02_PRELIMINARY_2020.mxd



LEGEND

- RELEASE LOCATION
- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- FLOOR SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA AND HAS BEEN EXCAVATED
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE WITH CONCENTRATIONS PREVIOUSLY EXCEEDING APPLICABLE CLOSURE CRITERIA AND HAS BEEN EXCAVATED
- GAS/PIPELINE
- WATER LINE
- ABOVEGROUND POLY FLOWLINE
- EXCAVATION EXTENT
- RELEASE EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
CI: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED
TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
NASH DEEP EAST 18-16 SWD TRUNK LINE
UNIT L SEC 19 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920043_NASH DEEP EAST 18\012920043_FIG03_EXCAVATION_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

NASH DEEP EAST 18-16 SWD TRUNK LINE
REMEDIATION PERMIT NUMBER NOT ASSIGNED
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**
SS01	8	04/15/2020	0.0168	0.195	0.147	1.06	1.42	<50.3	193	<50.3	193	**193**	**38,700**
SS02	8	04/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	**33,700**
SS03	8	04/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	**29,000**
SS04	8	04/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	**21,500**
SS05	8	04/15/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	**20,500**
SW01	0 - 12	04/16/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	454
SW02	0 - 8	04/21/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	233
SW03	0 - 8	04/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	**603**
SW03	0 - 8	04/29/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	204
SW04	0 - 8	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	112
SW05	0 - 12	04/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	493
SW06	0 - 8	04/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	81.1
SW07	0 - 8	04/28/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	348
SW08	0 - 8	04/29/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	470
FS01	13	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	70.9
FS02	13	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	38.2
FS03	13	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	96.9
FS04	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	**1,030**
FS04A	8.5	05/13/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	**707**
FS04B	8.5	05/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	300
FS05	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	53.8
FS06	8	05/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	20.0

A proud member of WSP

TABLE 1
SOIL ANALYTICAL RESULTS

NASH DEEP EAST 18-16 SWD TRUNK LINE
REMEDIATION PERMIT NUMBER NOT ASSIGNED
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**
FS07	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	**2,200**
FS07A	8.5	05/13/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	184
FS08	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	276
FS09	8	05/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	285
FS10	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	72.5
FS11	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	141
FS12	8	05/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	66.2
FS13	8	05/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	120
FS14	8	04/29/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	331

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

Grey - indicates removed soil

< - indicates result is below laboratory reporting limits

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

A proud member of WSP

ATTACHMENT 1: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of initial staining along line.

Photograph 2: View west of staining along line.

Photograph 3: View southwest of the final excavation extent.

A proud member of WSP

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

Analytical Report 658964

for

LT Environmental, Inc.

Project Manager: Tacoma Morrissey

Nash Deep 18-16

012920043

04.20.2020

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)

04.20.2020

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

Reference: XENCO Report No(s): **658964**
Nash Deep 18-16
Project Address:

Tacoma Morrissey:

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) 658964. 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. 658964 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04.15.2020 09:50	8 ft	658964-001
SS02	S	04.15.2020 09:52	8 ft	658964-002
SS03	S	04.15.2020 09:54	8 ft	658964-003
SS04	S	04.15.2020 10:08	8 ft	658964-004
SS05	S	04.15.2020 10:02	8 ft	658964-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *658964*

Report Date: *04.20.2020*
Date Received: *04.15.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3123297 BTEX by EPA 8021B

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

Certificate of Analysis Summary 658964

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Tacoma Morrissey
Project Location:

Date Received in Lab: Wed 04.15.2020 17:01
Report Date: 04.20.2020 09:10
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	658964-001		658964-002		658964-003		658964-004		658964-005	
	Field Id:	SS01		SS02		SS03		SS04		SS05	
	Depth:	8- ft		8- ft		8- ft		8- ft		8- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.15.2020 09:50		04.15.2020 09:52		04.15.2020 09:54		04.15.2020 10:08		04.15.2020 10:02	
BTEX by EPA 8021B	***Extracted:***	04.16.2020 07:22		04.16.2020 07:22		04.16.2020 07:22		04.16.2020 07:22		04.16.2020 07:22	
	Analyzed:	04.16.2020 19:11		04.16.2020 19:32		04.16.2020 19:52		04.16.2020 20:12		04.16.2020 20:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.0168	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		0.195	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		0.147	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		0.760	0.00399	<0.00399	0.00399	<0.00399	0.00399	<0.00399	0.00399	<0.00400	0.00400
o-Xylene		0.302	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		1.06	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		1.42	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	04.16.2020 07:18		04.16.2020 07:18		04.16.2020 07:18		04.16.2020 07:18		04.16.2020 07:18	
	Analyzed:	04.16.2020 11:33		04.16.2020 11:39		04.16.2020 11:44		04.16.2020 11:50		04.16.2020 11:55	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		38700	251	33700	248	29000	250	21500	251	20500	251
TPH by SW8015 Mod	***Extracted:***	04.16.2020 12:00		04.16.2020 12:00		04.16.2020 12:00		04.16.2020 12:00		04.16.2020 12:00	
	Analyzed:	04.16.2020 19:56		04.16.2020 20:17		04.16.2020 20:37		04.16.2020 20:58		04.16.2020 21:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.2	50.2
Diesel Range Organics (DRO)		193	50.3	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.2	50.2
Total GRO-DRO		193	50.3	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.2	50.2
Total TPH		193	50.3	<50.1	50.1	<50.2	50.2	<50.1	50.1	<50.2	50.2

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-001	Date Collected:	04.15.2020 09:50	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:18	Basis:	Wet Weight
Seq Number:	3123309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38700**	251	mg/kg	04.16.2020 11:33		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3123293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.16.2020 19:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	**193**	50.3	mg/kg	04.16.2020 19:56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.16.2020 19:56	U	1
Total GRO-DRO	PHC628	**193**	50.3	mg/kg	04.16.2020 19:56		1
Total TPH	PHC635	**193**	50.3	mg/kg	04.16.2020 19:56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.16.2020 19:56	
o-Terphenyl	84-15-1	105	%	70-135	04.16.2020 19:56	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-001	Date Collected:	04.15.2020 09:50	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:22	Basis:	Wet Weight
Seq Number:	3123297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.0168**	0.00200	mg/kg	04.16.2020 19:11		1
Toluene	108-88-3	**0.195**	0.00200	mg/kg	04.16.2020 19:11		1
Ethylbenzene	100-41-4	**0.147**	0.00200	mg/kg	04.16.2020 19:11		1
m,p-Xylenes	179601-23-1	**0.760**	0.00399	mg/kg	04.16.2020 19:11		1
o-Xylene	95-47-6	**0.302**	0.00200	mg/kg	04.16.2020 19:11		1
Total Xylenes	1330-20-7	**1.06**	0.00200	mg/kg	04.16.2020 19:11		1
Total BTEX		**1.42**	0.00200	mg/kg	04.16.2020 19:11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	04.16.2020 19:11	
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.16.2020 19:11	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-002	Date Collected:	04.15.2020 09:52	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:18	Basis:	Wet Weight
Seq Number:	3123309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**33700**	248	mg/kg	04.16.2020 11:39		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3123293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.16.2020 20:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.16.2020 20:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.16.2020 20:17	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.16.2020 20:17	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.16.2020 20:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.16.2020 20:17	
o-Terphenyl	84-15-1	107	%	70-135	04.16.2020 20:17	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-002	Date Collected:	04.15.2020 09:52	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:22	Basis:	Wet Weight
Seq Number:	3123297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.16.2020 19:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.2020 19:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.16.2020 19:32	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.16.2020 19:32	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-003	Date Collected:	04.15.2020 09:54	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:18	Basis:	Wet Weight
Seq Number:	3123309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29000**	250	mg/kg	04.16.2020 11:44		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3123293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.16.2020 20:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.16.2020 20:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.16.2020 20:37	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.16.2020 20:37	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.16.2020 20:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.16.2020 20:37	
o-Terphenyl	84-15-1	109	%	70-135	04.16.2020 20:37	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-003	Date Collected:	04.15.2020 09:54	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:22	Basis:	Wet Weight
Seq Number:	3123297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.16.2020 19:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.2020 19:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.16.2020 19:52	
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.16.2020 19:52	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-004	Date Collected:	04.15.2020 10:08	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:18	Basis:	Wet Weight
Seq Number:	3123309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21500**	251	mg/kg	04.16.2020 11:50		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3123293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.16.2020 20:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.16.2020 20:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.16.2020 20:58	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.16.2020 20:58	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.16.2020 20:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.16.2020 20:58	
o-Terphenyl	84-15-1	110	%	70-135	04.16.2020 20:58	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-004	Date Collected:	04.15.2020 10:08	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:22	Basis:	Wet Weight
Seq Number:	3123297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.16.2020 20:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.2020 20:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.16.2020 20:12	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.16.2020 20:12	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-005	Date Collected:	04.15.2020 10:02	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:18	Basis:	Wet Weight
Seq Number:	3123309				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20500**	251	mg/kg	04.16.2020 11:55		25

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.16.2020 12:00	Basis:	Wet Weight
Seq Number:	3123293				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.16.2020 21:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.16.2020 21:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.16.2020 21:18	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.16.2020 21:18	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.16.2020 21:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.16.2020 21:18	
o-Terphenyl	84-15-1	108	%	70-135	04.16.2020 21:18	

Certificate of Analytical Results 658964

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	04.15.2020 17:01
Lab Sample Id:	658964-005	Date Collected:	04.15.2020 10:02	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.16.2020 07:22	Basis:	Wet Weight
Seq Number:	3123297				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.16.2020 20:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.16.2020 20:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.16.2020 20:33	
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.16.2020 20:33	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 658964

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123309 — Matrix: Solid — Date Prep: 04.16.2020
MB Sample Id: 7701377-1-BLK — LCS Sample Id: 7701377-1-BKS — LCSD Sample Id: 7701377-1-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	255	102	255	102	90-110	0	20	mg/kg	04.16.2020 09:16	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123309 — Matrix: Soil — Date Prep: 04.16.2020
Parent Sample Id: 658843-001 — MS Sample Id: 658843-001 S — MSD Sample Id: 658843-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	863	399	1270	102	1270	102	90-110	0	20	mg/kg	04.16.2020 09:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123309 — Matrix: Soil — Date Prep: 04.16.2020
Parent Sample Id: 658962-009 — MS Sample Id: 658962-009 S — MSD Sample Id: 658962-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	399	407	102	413	104	90-110	1	20	mg/kg	04.16.2020 10:50	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123293 — Matrix: Solid — Date Prep: 04.16.2020
MB Sample Id: 7701402-1-BLK — LCS Sample Id: 7701402-1-BKS — LCSD Sample Id: 7701402-1-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	974	97	940	94	70-135	4	35	mg/kg	04.16.2020 12:05	
Diesel Range Organics (DRO)	<50.0	1000	1110	111	1060	106	70-135	5	35	mg/kg	04.16.2020 12:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		108		107		70-135	%	04.16.2020 12:05
o-Terphenyl	96		108		120		70-135	%	04.16.2020 12:05

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123293 — Matrix: Solid — Date Prep: 04.16.2020
MB Sample Id: 7701402-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.16.2020 11:45	

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

QC Summary 658964

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3123293 | Matrix: Soil | Date Prep: 04.16.2020
Parent Sample Id: 658990-008 | MS Sample Id: 658990-008 S | MSD Sample Id: 658990-008 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	973	97	1040	104	70-135	7	35	mg/kg	04.16.2020 13:28	
Diesel Range Organics (DRO)	<50.0	1000	1130	113	1130	113	70-135	0	35	mg/kg	04.16.2020 13:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		119		70-135	%	04.16.2020 13:28
o-Terphenyl	112		118		70-135	%	04.16.2020 13:28

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3123297 | Matrix: Solid | Date Prep: 04.16.2020
MB Sample Id: 7701378-1-BLK | LCS Sample Id: 7701378-1-BKS | LCSD Sample Id: 7701378-1-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	0.108	108	0.113	113	70-130	5	35	mg/kg	04.16.2020 12:03	
Toluene	<0.00200	0.100	0.103	103	0.108	108	70-130	5	35	mg/kg	04.16.2020 12:03	
Ethylbenzene	<0.00200	0.100	0.0968	97	0.100	100	71-129	3	35	mg/kg	04.16.2020 12:03	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.206	103	70-135	3	35	mg/kg	04.16.2020 12:03	
o-Xylene	<0.00200	0.100	0.102	102	0.105	105	71-133	3	35	mg/kg	04.16.2020 12:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		105		70-130	%	04.16.2020 12:03
4-Bromofluorobenzene	95		96		92		70-130	%	04.16.2020 12:03

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3123297 | Matrix: Soil | Date Prep: 04.16.2020
Parent Sample Id: 658843-001 | MS Sample Id: 658843-001 S | MSD Sample Id: 658843-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.106	106	0.0807	81	70-130	27	35	mg/kg	04.16.2020 12:44	
Toluene	<0.00200	0.0998	0.102	102	0.0796	80	70-130	25	35	mg/kg	04.16.2020 12:44	
Ethylbenzene	<0.00200	0.0998	0.0957	96	0.0764	77	71-129	22	35	mg/kg	04.16.2020 12:44	
m,p-Xylenes	<0.00399	0.200	0.197	99	0.160	80	70-135	21	35	mg/kg	04.16.2020 12:44	
o-Xylene	<0.00200	0.0998	0.100	100	0.0838	84	71-133	18	35	mg/kg	04.16.2020 12:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	04.16.2020 12:44
4-Bromofluorobenzene	96		96		70-130	%	04.16.2020 12:44

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Page 39 of 171

Chain of Custody

Work Order No: 658964

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 _____ of _____

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 701-2610	Email:	dmoir@ltenv.com tcasey@ltenv.com fsmith@ltenv.com

Work Order Comments

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

Project Name:	NASH Deep 16-16	Turn Around	
Project Number:	012920043	Routine	☒
P.O. Number:	32420 Spill Data	Rush:	
Sampler's Name:	Fatima Smith & Travis Casey	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.4	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:	5	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	4/15/20	0950	8'	1	X	X	X
SS02			0952		1	X	X	X
SS03			0954		1	X	X	X
SS04			1008		1	X	X	X
SS05			1002		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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/15/20 17:01	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Received by OCD: 6/4/2020 1:24:31 PM

Final 1.000

Page 19 of 20

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.15.2020 05.01.00 PM

Work Order #: 658964

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)?	2.4
#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: 04.15.2020

Checklist reviewed by: Jessica Kramer Date: 04.16.2020

Jessica Kramer

Analytical Report 659391

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

04.22.2020

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)

04.22.2020

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

Reference: XENCO Report No(s): **659391**
Nash Deep 18-16
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) 659391. 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. 659391 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 659391

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	04.16.2020 10:47	0 - 12 ft	659391-001
SW05	S	04.17.2020 14:27	0 - 12 ft	659391-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *659391*

Report Date: *04.22.2020*
Date Received: *04.21.2020*

Sample receipt non conformances and comments:

Samples received in bulk containers.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3123697 BTEX by EPA 8021B
Samples received in bulk containers.

Certificate of Analysis Summary 659391

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 04.21.2020 13:50
Report Date: 04.22.2020 13:34
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	659391-001		659391-002					
	Field Id:	SW01		SW05					
	Depth:	0-12 ft		0-12 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	04.16.2020 10:47		04.17.2020 14:27					
BTEX by EPA 8021B	***Extracted:***	04.21.2020 16:08		04.21.2020 16:08					
	Analyzed:	04.21.2020 18:32		04.21.2020 18:52					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00202	0.00202				
Toluene		<0.00200	0.00200	<0.00202	0.00202				
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202				
m,p-Xylenes		<0.00399	0.00399	<0.00404	0.00404				
o-Xylene		<0.00200	0.00200	<0.00202	0.00202				
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202				
Total BTEX		<0.00200	0.00200	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	04.21.2020 16:00		04.21.2020 16:00					
	Analyzed:	04.21.2020 16:52		04.21.2020 17:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		454	49.8	493	49.6				
TPH by SW8015 Mod	***Extracted:***	04.21.2020 15:45		04.21.2020 15:45					
	Analyzed:	04.21.2020 17:16		04.21.2020 17:36					
	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				

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 659391

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.21.2020 13:50
Lab Sample Id:	659391-001	Date Collected:	04.16.2020 10:47	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.21.2020 16:00	Basis:	Wet Weight
Seq Number:	3123702				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**454**	49.8	mg/kg	04.21.2020 16:52		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.21.2020 15:45	Basis:	Wet Weight
Seq Number:	3123744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.21.2020 17:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	04.21.2020 17:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.21.2020 17:16	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	04.21.2020 17:16	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	04.21.2020 17:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.21.2020 17:16	
o-Terphenyl	84-15-1	108	%	70-135	04.21.2020 17:16	

Certificate of Analytical Results 659391

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	04.21.2020 13:50
Lab Sample Id:	659391-001	Date Collected:	04.16.2020 10:47	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.21.2020 16:08	Basis:	Wet Weight
Seq Number:	3123697				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.21.2020 18:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.21.2020 18:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.21.2020 18:32	
1,4-Difluorobenzene	540-36-3	108	%	70-130	04.21.2020 18:32	

Certificate of Analytical Results 659391

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.21.2020 13:50
Lab Sample Id:	659391-002	Date Collected:	04.17.2020 14:27	Sample Depth:	0 - 12 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.21.2020 16:00	Basis:	Wet Weight
Seq Number:	3123702				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**493**	49.6	mg/kg	04.21.2020 17:08		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.21.2020 15:45	Basis:	Wet Weight
Seq Number:	3123744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.21.2020 17:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.21.2020 17:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.21.2020 17:36	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.21.2020 17:36	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.21.2020 17:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.21.2020 17:36	
o-Terphenyl	84-15-1	107	%	70-135	04.21.2020 17:36	

Certificate of Analytical Results 659391

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	04.21.2020 13:50
Lab Sample Id:	659391-002	Date Collected:	04.17.2020 14:27	Sample Depth:	0 - 12 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.21.2020 16:08	Basis:	Wet Weight
Seq Number:	3123697				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.21.2020 18:52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.21.2020 18:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.21.2020 18:52	
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.21.2020 18:52	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 659391

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123702 — Matrix: Solid — Date Prep: 04.21.2020
MB Sample Id: 7701739-1-BLK — LCS Sample Id: 7701739-1-BKS — LCSD Sample Id: 7701739-1-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	255	102	255	102	90-110	0	20	mg/kg	04.21.2020 16:41	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123702 — Matrix: Soil — Date Prep: 04.21.2020
Parent Sample Id: 659391-001 — MS Sample Id: 659391-001 S — MSD Sample Id: 659391-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	454	200	656	101	652	99	90-110	1	20	mg/kg	04.21.2020 16:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123702 — Matrix: Soil — Date Prep: 04.21.2020
Parent Sample Id: 659405-009 — MS Sample Id: 659405-009 S — MSD Sample Id: 659405-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	72.2	200	278	103	277	102	90-110	0	20	mg/kg	04.21.2020 18:14	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123744 — Matrix: Solid — Date Prep: 04.21.2020
MB Sample Id: 7701768-1-BLK — LCS Sample Id: 7701768-1-BKS — LCSD Sample Id: 7701768-1-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	853	85	862	86	70-135	1	35	mg/kg	04.21.2020 14:57	
Diesel Range Organics (DRO)	<50.0	1000	953	95	964	96	70-135	1	35	mg/kg	04.21.2020 14:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		114		113		70-135	%	04.21.2020 14:57
o-Terphenyl	111		113		113		70-135	%	04.21.2020 14:57

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123744 — Matrix: Solid — Date Prep: 04.21.2020
MB Sample Id: 7701768-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.21.2020 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

QC Summary 659391

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3123744 | Matrix: Soil | Date Prep: 04.21.2020
Parent Sample Id: 659295-002 | MS Sample Id: 659295-002 S | MSD Sample Id: 659295-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	919	92	942	94	70-135	2	35	mg/kg	04.21.2020 16:35	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	1070	107	70-135	3	35	mg/kg	04.21.2020 16:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		124		70-135	%	04.21.2020 16:35
o-Terphenyl	122		125		70-135	%	04.21.2020 16:35

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5035A
Seq Number: 3123697 | Matrix: Solid | Date Prep: 04.21.2020
MB Sample Id: 7701736-1-BLK | LCS Sample Id: 7701736-1-BKS | LCSD Sample Id: 7701736-1-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	0.109	109	0.105	105	70-130	4	35	mg/kg	04.21.2020 16:50	
Toluene	<0.00200	0.100	0.104	104	0.0996	100	70-130	4	35	mg/kg	04.21.2020 16:50	
Ethylbenzene	<0.00200	0.100	0.0963	96	0.0925	93	71-129	4	35	mg/kg	04.21.2020 16:50	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.189	95	70-135	4	35	mg/kg	04.21.2020 16:50	
o-Xylene	<0.00200	0.100	0.100	100	0.0968	97	71-133	3	35	mg/kg	04.21.2020 16:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		104		104		70-130	%	04.21.2020 16:50
4-Bromofluorobenzene	95		92		91		70-130	%	04.21.2020 16:50

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5035A
Seq Number: 3123697 | Matrix: Soil | Date Prep: 04.21.2020
Parent Sample Id: 659391-001 | MS Sample Id: 659391-001 S | MSD Sample Id: 659391-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0997	100	0.103	103	70-130	3	35	mg/kg	04.21.2020 17:31	
Toluene	<0.00200	0.0998	0.0969	97	0.0999	100	70-130	3	35	mg/kg	04.21.2020 17:31	
Ethylbenzene	<0.00200	0.0998	0.0919	92	0.0938	94	71-129	2	35	mg/kg	04.21.2020 17:31	
m,p-Xylenes	<0.00399	0.200	0.190	95	0.193	97	70-135	2	35	mg/kg	04.21.2020 17:31	
o-Xylene	<0.00200	0.0998	0.0954	96	0.0965	97	71-133	1	35	mg/kg	04.21.2020 17:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		103		70-130	%	04.21.2020 17:31
4-Bromofluorobenzene	95		95		70-130	%	04.21.2020 17:31

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Page 53 of 171

Chain of Custody

Work Order No: 695391

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	0129200 43	Routine	☑
Project Location	3-24-20 spill date	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.2	Thermometer ID	
Received Intact:	(Yes) No		+NM007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA D = 8021)	Chloride (EPA 300.0)
	SW01	S	4/16/20	1047	0-12'	1		X	X	X
	SW05	S	4/17/20	1427	0-12'	1		X	X	X

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/21/20 1:00pm	2		4/21/20 13:50
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM
Final 1.000
Page 13 of 13

Analytical Report 659427

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

04.23.2020

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)

04.23.2020

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

Reference: XENCO Report No(s): **659427**
Nash Deep 18-16
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) 659427. 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. 659427 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 659427

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW02	S	04.21.2020 14:58	0 - 8 ft	659427-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *659427*

Report Date: *04.23.2020*
Date Received: *04.21.2020*

Sample receipt non conformances and comments:

Samples received in bulk containers.

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 659427

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 04.21.2020 16:50
Report Date: 04.23.2020 11:31
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	659427-001					
	Field Id:	SW02					
	Depth:	0-8 ft					
	Matrix:	SOIL					
	Sampled:	04.21.2020 14:58					
BTEX by EPA 8021B	***Extracted:***	04.22.2020 14:57					
	Analyzed:	04.22.2020 16:12					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	04.21.2020 17:21					
	Analyzed:	04.21.2020 21:27					
	Units/RL:	mg/kg	RL				
Chloride		233	49.8				
TPH by SW8015 Mod	***Extracted:***	04.22.2020 17:30					
	Analyzed:	04.22.2020 19:08					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				
Total GRO-DRO		<49.8	49.8				
Total TPH		<49.8	49.8				

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 659427

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.21.2020 16:50
Lab Sample Id:	659427-001	Date Collected:	04.21.2020 14:58	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.21.2020 17:21	Basis:	Wet Weight
Seq Number:	3123703				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**233**	49.8	mg/kg	04.21.2020 21:27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.22.2020 17:30	Basis:	Wet Weight
Seq Number:	3123877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.22.2020 19:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.22.2020 19:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.22.2020 19:08	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.22.2020 19:08	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.22.2020 19:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	04.22.2020 19:08	
o-Terphenyl	84-15-1	122	%	70-135	04.22.2020 19:08	

Certificate of Analytical Results 659427

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	04.21.2020 16:50
Lab Sample Id:	659427-001	Date Collected:	04.21.2020 14:58	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.22.2020 14:57	Basis:	Wet Weight
Seq Number:	3123852				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.22.2020 16:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.22.2020 16:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	04.22.2020 16:12	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.22.2020 16:12	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 659427

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123703 — Matrix: Solid — Date Prep: 04.21.2020
MB Sample Id: 7701741-1-BLK — LCS Sample Id: 7701741-1-BKS — LCSD Sample Id: 7701741-1-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	255	102	255	102	90-110	0	20	mg/kg	04.21.2020 19:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123703 — Matrix: Soil — Date Prep: 04.21.2020
Parent Sample Id: 659422-001 — MS Sample Id: 659422-001 S — MSD Sample Id: 659422-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	56.1	200	263	103	261	102	90-110	1	20	mg/kg	04.21.2020 19:58	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3123703 — Matrix: Soil — Date Prep: 04.21.2020
Parent Sample Id: 659426-002 — MS Sample Id: 659426-002 S — MSD Sample Id: 659426-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	387	200	584	99	582	98	90-110	0	20	mg/kg	04.21.2020 21:15	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123877 — Matrix: Solid — Date Prep: 04.22.2020
MB Sample Id: 7701870-1-BLK — LCS Sample Id: 7701870-1-BKS — LCSD Sample Id: 7701870-1-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	896	90	707	71	70-135	24	35	mg/kg	04.22.2020 15:42	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	777	78	70-135	26	35	mg/kg	04.22.2020 15:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		117		89		70-135	%	04.22.2020 15:42
o-Terphenyl	83		101		76		70-135	%	04.22.2020 15:42

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3123877 — Matrix: Solid — Date Prep: 04.22.2020
MB Sample Id: 7701870-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.22.2020 13:30	

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 659427

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3123877 Matrix: Soil Date Prep: 04.22.2020
Parent Sample Id: 659425-003 MS Sample Id: 659425-003 S MSD Sample Id: 659425-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	876	88	890	89	70-135	2	35	mg/kg	04.22.2020 17:24	
Diesel Range Organics (DRO)	<50.2	1000	970	97	988	99	70-135	2	35	mg/kg	04.22.2020 17:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		114		70-135	%	04.22.2020 17:24
o-Terphenyl	117		120		70-135	%	04.22.2020 17:24

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3123852 Matrix: Solid Date Prep: 04.22.2020
MB Sample Id: 7701799-1-BLK LCS Sample Id: 7701799-1-BKS LCSD Sample Id: 7701799-1-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	0.0997	100	0.109	109	70-130	9	35	mg/kg	04.22.2020 14:29	
Toluene	<0.00200	0.100	0.0941	94	0.104	104	70-130	10	35	mg/kg	04.22.2020 14:29	
Ethylbenzene	<0.00200	0.100	0.0882	88	0.0975	98	71-129	10	35	mg/kg	04.22.2020 14:29	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.201	101	70-135	10	35	mg/kg	04.22.2020 14:29	
o-Xylene	<0.00200	0.100	0.0912	91	0.102	102	71-133	11	35	mg/kg	04.22.2020 14:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		104		105		70-130	%	04.22.2020 14:29
4-Bromofluorobenzene	93		92		90		70-130	%	04.22.2020 14:29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3123852 Matrix: Soil Date Prep: 04.22.2020
Parent Sample Id: 659427-001 MS Sample Id: 659427-001 S MSD Sample Id: 659427-001 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	0.0882	88	0.0954	94	70-130	8	35	mg/kg	04.22.2020 21:39	
Toluene	<0.00200	0.100	0.0972	97	0.0905	90	70-130	7	35	mg/kg	04.22.2020 21:39	
Ethylbenzene	<0.00200	0.100	0.0892	89	0.0834	83	71-129	7	35	mg/kg	04.22.2020 21:39	
m,p-Xylenes	<0.00401	0.200	0.186	93	0.170	84	70-135	9	35	mg/kg	04.22.2020 21:39	
o-Xylene	<0.00200	0.100	0.0862	86	0.0867	86	71-133	1	35	mg/kg	04.22.2020 21:39	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		105		70-130	%	04.22.2020 21:39
4-Bromofluorobenzene	93		96		70-130	%	04.22.2020 21:39

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Page 64 of 171

Chain of Custody

Work Order No: E594127

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine	☑
Project Location	3-24-20 spill date	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	3.2	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:	1

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	Sample Comments
	SW02	S	4/21/20	1458	0-8'	1		X	X	X	

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			4/21/20 1635	2		4/21/20 16:50
3				4		
5				6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM
Final 1.000
Page 11 of 12

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.21.2020 04.50.00 PM

Work Order #: 659427

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#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: 04.21.2020

Checklist reviewed by: Jessica Kramer Date: 04.23.2020

Jessica Kramer

Analytical Report 659891

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

04.28.2020

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)

04.28.2020

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

Reference: XENCO Report No(s): **659891**
Nash Deep 18-16
Project Address: Eddy County

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) 659891. 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. 659891 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW03	S	04.27.2020 10:07	0 - 8 ft	659891-001
SW04	S	04.27.2020 09:50	0 - 8 ft	659891-002
SW06	S	04.27.2020 10:55	0 - 8 ft	659891-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *659891*

Report Date: *04.28.2020*
Date Received: *04.27.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 659891

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Mon 04.27.2020 16:10
Report Date: 04.28.2020 12:22
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	659891-001		659891-002		659891-003					
	Field Id:	SW03		SW04		SW06					
	Depth:	0-8 ft		0-8 ft		0-8 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	04.27.2020 10:07		04.27.2020 09:50		04.27.2020 10:55					
BTEX by EPA 8021B	***Extracted:***	04.27.2020 17:40		04.27.2020 17:40		04.27.2020 17:40					
	Analyzed:	04.28.2020 01:36		04.28.2020 01:57		04.28.2020 02:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00402	0.00402				
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	04.27.2020 17:04		04.27.2020 17:04		04.27.2020 17:04					
	Analyzed:	04.27.2020 18:38		04.27.2020 18:43		04.27.2020 18:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		603	49.6	112	50.1	81.1	50.0				
TPH by SW8015 Mod	***Extracted:***	04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00					
	Analyzed:	04.27.2020 19:04		04.27.2020 19:24		04.27.2020 19:44					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.2	50.2	<49.9	49.9				
Diesel Range Organics (DRO)		<50.1	50.1	<50.2	50.2	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2	<49.9	49.9				
Total GRO-DRO		<50.1	50.1	<50.2	50.2	<49.9	49.9				
Total TPH		<50.1	50.1	<50.2	50.2	<49.9	49.9				

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-001	Date Collected:	04.27.2020 10:07	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:04	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**603**	49.6	mg/kg	04.27.2020 18:38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.27.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.27.2020 19:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.27.2020 19:04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.27.2020 19:04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.27.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.27.2020 19:04	
o-Terphenyl	84-15-1	112	%	70-135	04.27.2020 19:04	

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-001	Date Collected:	04.27.2020 10:07	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:40	Basis:	Wet Weight
Seq Number:	3124302				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.28.2020 01:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.28.2020 01:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.28.2020 01:36	
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.28.2020 01:36	

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-002	Date Collected:	04.27.2020 09:50	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:04	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**112**	50.1	mg/kg	04.27.2020 18:43		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.27.2020 19:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.27.2020 19:24	
o-Terphenyl	84-15-1	102	%	70-135	04.27.2020 19:24	

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-002	Date Collected:	04.27.2020 09:50	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:40	Basis:	Wet Weight
Seq Number:	3124302				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.28.2020 01:57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.28.2020 01:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.28.2020 01:57	
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.28.2020 01:57	

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-003	Date Collected:	04.27.2020 10:55	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:04	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**81.1**	50.0	mg/kg	04.27.2020 18:49		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.27.2020 19:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.27.2020 19:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.27.2020 19:44	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.27.2020 19:44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.27.2020 19:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.27.2020 19:44	
o-Terphenyl	84-15-1	107	%	70-135	04.27.2020 19:44	

Certificate of Analytical Results 659891

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	04.27.2020 16:10
Lab Sample Id:	659891-003	Date Collected:	04.27.2020 10:55	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 17:40	Basis:	Wet Weight
Seq Number:	3124302				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.28.2020 02:18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.28.2020 02:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.28.2020 02:18	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.28.2020 02:18	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 659891

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702149-1-BLK — LCS Sample Id: 7702149-1-BKS — LCSD Sample Id: 7702149-1-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	250	100	250	100	90-110	0	20	mg/kg	04.27.2020 16:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659876-001 — MS Sample Id: 659876-001 S — MSD Sample Id: 659876-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	201	1410	90	1420	95	90-110	1	20	mg/kg	04.27.2020 16:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659890-002 — MS Sample Id: 659890-002 S — MSD Sample Id: 659890-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	330	199	548	110	548	110	90-110	0	20	mg/kg	04.27.2020 17:59	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124331 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702173-1-BLK — LCS Sample Id: 7702173-1-BKS — LCSD Sample Id: 7702173-1-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	914	91	898	90	70-135	2	35	mg/kg	04.27.2020 14:22	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	998	100	70-135	2	35	mg/kg	04.27.2020 14:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		130		131		70-135	%	04.27.2020 14:22
o-Terphenyl	91		116		132		70-135	%	04.27.2020 14:22

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124331 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702173-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

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 659891

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124331 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659819-002 — MS Sample Id: 659819-002 S — MSD Sample Id: 659819-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	812	80	864	86	70-135	6	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	877	87	971	97	70-135	10	35	mg/kg	04.27.2020 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		105		70-135	%	04.27.2020 14:01
o-Terphenyl	102		109		70-135	%	04.27.2020 14:01

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3124302 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702139-1-BLK — LCS Sample Id: 7702139-1-BKS — LCSD Sample Id: 7702139-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.123	123	70-130	8	35	mg/kg	04.27.2020 22:02	
Toluene	<0.00200	0.100	0.101	101	0.112	112	70-130	10	35	mg/kg	04.27.2020 22:02	
Ethylbenzene	<0.00200	0.100	0.0950	95	0.104	104	71-129	9	35	mg/kg	04.27.2020 22:02	
m,p-Xylenes	<0.00400	0.200	0.185	93	0.201	101	70-135	8	35	mg/kg	04.27.2020 22:02	
o-Xylene	<0.00200	0.100	0.0953	95	0.105	105	71-133	10	35	mg/kg	04.27.2020 22:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		108		111		70-130	%	04.27.2020 22:02
4-Bromofluorobenzene	106		96		97		70-130	%	04.27.2020 22:02

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5035A
Seq Number: 3124302 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659820-011 — MS Sample Id: 659820-011 S — MSD Sample Id: 659820-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.130	130	0.129	129	70-130	1	35	mg/kg	04.27.2020 22:44	
Toluene	<0.00200	0.0998	0.114	114	0.114	114	70-130	0	35	mg/kg	04.27.2020 22:44	
Ethylbenzene	<0.00200	0.0998	0.107	107	0.106	106	71-129	1	35	mg/kg	04.27.2020 22:44	
m,p-Xylenes	<0.00399	0.200	0.207	104	0.205	103	70-135	1	35	mg/kg	04.27.2020 22:44	
o-Xylene	<0.00200	0.0998	0.107	107	0.105	105	71-133	2	35	mg/kg	04.27.2020 22:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		109		70-130	%	04.27.2020 22:44
4-Bromofluorobenzene	98		100		70-130	%	04.27.2020 22:44

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

Page 80 of 171

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 459891

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 Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM, 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine	☑
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	2.8	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:	3

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (8021)	Chloride (EPA 300.0)	Sample Comments
	SW03	R	4/27/20	1007	0-8'	1		X	X	X	gypsum
	SW04	R	4/23/20	0950	0-8'	1		X	X	X	gypsum
	SW06	R	4/27/20	1055	0-8'	1		X	X	X	gypsum

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/27/20 16:10	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM

Final 1.000

Page 15 of 15

Analytical Report 660036

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

04.29.2020

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)

04.29.2020

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

Reference: XENCO Report No(s): **660036**
Nash Deep 18-16
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) 660036. 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. 660036 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 660036

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW07	S	04.28.2020 14:46	0 - 8 ft	660036-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *660036*

Report Date: *04.29.2020*
Date Received: *04.28.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 660036

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue 04.28.2020 16:28
Report Date: 04.29.2020 12:52
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	660036-001					
	Field Id:	SW07					
	Depth:	0-8 ft					
	Matrix:	SOIL					
	Sampled:	04.28.2020 14:46					
BTEX by EPA 8021B	***Extracted:***	04.28.2020 18:00					
	Analyzed:	04.28.2020 23:59					
	Units/RL:	mg/kg	RL				
Benzene		<0.00198	0.00198				
Toluene		<0.00198	0.00198				
Ethylbenzene		<0.00198	0.00198				
m,p-Xylenes		<0.00397	0.00397				
o-Xylene		<0.00198	0.00198				
Total Xylenes		<0.00198	0.00198				
Total BTEX		<0.00198	0.00198				
Chloride by EPA 300	***Extracted:***	04.28.2020 17:30					
	Analyzed:	04.28.2020 19:58					
	Units/RL:	mg/kg	RL				
Chloride		348	49.9				
TPH by SW8015 Mod	***Extracted:***	04.28.2020 17:30					
	Analyzed:	04.29.2020 02:07					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2				
Diesel Range Organics (DRO)		<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2				
Total GRO-DRO		<50.2	50.2				
Total TPH		<50.2	50.2				

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 660036

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660036-001	Date Collected:	04.28.2020 14:46	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124455				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**348**	49.9	mg/kg	04.28.2020 19:58		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.28.2020 17:30	Basis:	Wet Weight
Seq Number:	3124494				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.29.2020 02:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.29.2020 02:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.29.2020 02:07	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.29.2020 02:07	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.29.2020 02:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.29.2020 02:07	
o-Terphenyl	84-15-1	102	%	70-135	04.29.2020 02:07	

Certificate of Analytical Results 660036

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	04.28.2020 16:28
Lab Sample Id:	660036-001	Date Collected:	04.28.2020 14:46	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.28.2020 18:00	Basis:	Wet Weight
Seq Number:	3124449				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.28.2020 23:59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.28.2020 23:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	04.28.2020 23:59	
1,4-Difluorobenzene	540-36-3	122	%	70-130	04.28.2020 23:59	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 660036

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702278-1-BLK — LCS Sample Id: 7702278-1-BKS — LCSD Sample Id: 7702278-1-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	253	101	254	102	90-110	0	20	mg/kg	04.28.2020 18:46	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660027-001 — MS Sample Id: 660027-001 S — MSD Sample Id: 660027-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	48.4	200	257	104	258	105	90-110	0	20	mg/kg	04.28.2020 19:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124455 — Matrix: Soil — Date Prep: 04.28.2020
Parent Sample Id: 660037-003 — MS Sample Id: 660037-003 S — MSD Sample Id: 660037-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	200	1330	100	1330	100	90-110	0	20	mg/kg	04.28.2020 20:21	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124494 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK — LCS Sample Id: 7702304-1-BKS — LCSD Sample Id: 7702304-1-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	975	98	937	94	70-135	4	35	mg/kg	04.28.2020 23:23	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1070	107	70-135	1	35	mg/kg	04.28.2020 23:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		127		131		70-135	%	04.28.2020 23:23
o-Terphenyl	123		122		128		70-135	%	04.28.2020 23:23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124494 — Matrix: Solid — Date Prep: 04.28.2020
MB Sample Id: 7702304-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.28.2020 23:03	

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 660036

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3124494 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 659919-037 MS Sample Id: 659919-037 S MSD Sample Id: 659919-037 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	879	88	905	90	70-135	3	35	mg/kg	04.29.2020 00:25	
Diesel Range Organics (DRO)	<50.0	1000	968	97	977	97	70-135	1	35	mg/kg	04.29.2020 00:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		112		70-135	%	04.29.2020 00:25
o-Terphenyl	119		111		70-135	%	04.29.2020 00:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Solid Date Prep: 04.28.2020
MB Sample Id: 7702273-1-BLK LCS Sample Id: 7702273-1-BKS LCSD Sample Id: 7702273-1-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	0.117	117	70-130	6	35	mg/kg	04.28.2020 22:12	
Toluene	<0.00200	0.100	0.0984	98	0.106	106	70-130	7	35	mg/kg	04.28.2020 22:12	
Ethylbenzene	<0.00200	0.100	0.0929	93	0.0989	99	71-129	6	35	mg/kg	04.28.2020 22:12	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.193	97	70-135	6	35	mg/kg	04.28.2020 22:12	
o-Xylene	<0.00200	0.100	0.0932	93	0.0996	100	71-133	7	35	mg/kg	04.28.2020 22:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		108		112		70-130	%	04.28.2020 22:12
4-Bromofluorobenzene	108		98		100		70-130	%	04.28.2020 22:12

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124449 Matrix: Soil Date Prep: 04.28.2020
Parent Sample Id: 660036-001 MS Sample Id: 660036-001 S MSD Sample Id: 660036-001 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	0.126	125	0.120	120	70-130	5	35	mg/kg	04.28.2020 22:55	
Toluene	<0.00202	0.101	0.113	112	0.105	105	70-130	7	35	mg/kg	04.28.2020 22:55	
Ethylbenzene	<0.00202	0.101	0.106	105	0.0982	98	71-129	8	35	mg/kg	04.28.2020 22:55	
m,p-Xylenes	<0.00404	0.202	0.206	102	0.191	96	70-135	8	35	mg/kg	04.28.2020 22:55	
o-Xylene	<0.00202	0.101	0.105	104	0.0989	99	71-133	6	35	mg/kg	04.28.2020 22:55	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	04.28.2020 22:55
4-Bromofluorobenzene	92		96		70-130	%	04.28.2020 22:55

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

Page 91 of 171

Chain of Custody

Work Order No: 6160036

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

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

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfield ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level I ☐ Level II ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine:	☑
PO #:	3/24/20 spill date	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM007		
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)
SW07	S	4/28/20	1446	0-8'	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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		4/28/20 10:28	2		
3			4		
5			6		

Received by OCD: 6/18/2020 1:24:31 PM
Final 1.000
Page 11 of 12

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.28.2020 04.28.00 PM

Work Order #: 660036

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.28.2020

Checklist reviewed by: Jessica Kramer Date: 04.29.2020

Jessica Kramer

Analytical Report 660189

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

05.01.2020

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)

05.01.2020

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

Reference: XENCO Report No(s): **660189**
Nash Deep 18-16
Project Address: Eddy County

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) 660189. 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. 660189 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW08	S	04.29.2020 10:03	0 - 8 ft	660189-001
SW03	S	04.29.2020 10:36	0 - 8 ft	660189-002
FS14	S	04.29.2020 14:42	8 ft	660189-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *660189*

Report Date: *05.01.2020*
Date Received: *04.29.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 660189

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 04.29.2020 15:57
Report Date: 05.01.2020 12:20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	660189-001		660189-002		660189-003					
	Field Id:	SW08		SW03		FS14					
	Depth:	0-8 ft		0-8 ft		8- ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	04.29.2020 10:03		04.29.2020 10:36		04.29.2020 14:42					
BTEX by EPA 8021B	***Extracted:***	04.29.2020 18:00		04.29.2020 18:00		04.29.2020 18:00					
	Analyzed:	04.30.2020 04:34		04.30.2020 04:55		04.30.2020 05:17					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398				
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	04.30.2020 12:00		04.30.2020 12:00		04.30.2020 12:00					
	Analyzed:	04.30.2020 14:25		04.30.2020 14:42		04.30.2020 14:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		470	9.96	204	49.8	331	49.8				
TPH by SW8015 Mod	***Extracted:***	04.29.2020 17:00		04.29.2020 17:00		04.29.2020 17:00					
	Analyzed:	04.29.2020 19:46		04.29.2020 20:06		04.29.2020 20:47					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<50.1	50.1				
Diesel Range Organics (DRO)		<49.8	49.8	<49.9	49.9	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.9	49.9	<50.1	50.1				
Total GRO-DRO		<49.8	49.8	<49.9	49.9	<50.1	50.1				
Total TPH		<49.8	49.8	<49.9	49.9	<50.1	50.1				

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

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-001	Date Collected:	04.29.2020 10:03	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 12:00	Basis:	Wet Weight
Seq Number:	3124744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**470**	9.96	mg/kg	04.30.2020 14:25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.29.2020 17:00	Basis:	Wet Weight
Seq Number:	3124586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.29.2020 19:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.29.2020 19:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.29.2020 19:46	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.29.2020 19:46	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.29.2020 19:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.29.2020 19:46	
o-Terphenyl	84-15-1	108	%	70-135	04.29.2020 19:46	

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-001	Date Collected:	04.29.2020 10:03	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.29.2020 18:00	Basis:	Wet Weight
Seq Number:	3124578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.2020 04:34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.2020 04:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.30.2020 04:34	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.30.2020 04:34	

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-002	Date Collected:	04.29.2020 10:36	Sample Depth:	0 - 8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 12:00	Basis:	Wet Weight
Seq Number:	3124744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**204**	49.8	mg/kg	04.30.2020 14:42		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.29.2020 17:00	Basis:	Wet Weight
Seq Number:	3124586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.29.2020 20:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.29.2020 20:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.29.2020 20:06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.29.2020 20:06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.29.2020 20:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.29.2020 20:06	
o-Terphenyl	84-15-1	108	%	70-135	04.29.2020 20:06	

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-002	Date Collected:	04.29.2020 10:36	Sample Depth:	0 - 8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.29.2020 18:00	Basis:	Wet Weight
Seq Number:	3124578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.2020 04:55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.2020 04:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	117	%	70-130	04.30.2020 04:55	
4-Bromofluorobenzene	460-00-4	112	%	70-130	04.30.2020 04:55	

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-003	Date Collected:	04.29.2020 14:42	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.30.2020 12:00	Basis:	Wet Weight
Seq Number:	3124744				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**331**	49.8	mg/kg	04.30.2020 14:48		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.29.2020 17:00	Basis:	Wet Weight
Seq Number:	3124586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.29.2020 20:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.29.2020 20:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.29.2020 20:47	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.29.2020 20:47	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.29.2020 20:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	04.29.2020 20:47	
o-Terphenyl	84-15-1	89	%	70-135	04.29.2020 20:47	

Certificate of Analytical Results 660189

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS14**	Matrix:	Soil	Date Received:	04.29.2020 15:57
Lab Sample Id:	660189-003	Date Collected:	04.29.2020 14:42	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.29.2020 18:00	Basis:	Wet Weight
Seq Number:	3124578				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.2020 05:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.2020 05:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	04.30.2020 05:17	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.30.2020 05:17	

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. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 660189

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124744 — Matrix: Solid — Date Prep: 04.30.2020
MB Sample Id: 7702383-1-BLK — LCS Sample Id: 7702383-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Chloride	<10.0	250	256	102	90-110	mg/kg	04.30.2020 14:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124744 — Matrix: Soil — Date Prep: 04.30.2020
Parent Sample Id: 660189-001 — MS Sample Id: 660189-001 S — MSD Sample Id: 660189-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	470	199	689	110	690	110	90-110	0	20	mg/kg	04.30.2020 15:33	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124586 — Matrix: Solid — Date Prep: 04.29.2020
MB Sample Id: 7702382-1-BLK — LCS Sample Id: 7702382-1-BKS — LCSD Sample Id: 7702382-1-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	909	91	875	88	70-135	4	35	mg/kg	04.29.2020 14:23	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	978	98	70-135	3	35	mg/kg	04.29.2020 14:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		112		108		70-135	%	04.29.2020 14:23
o-Terphenyl	98		114		109		70-135	%	04.29.2020 14:23

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124586 — Matrix: Solid — Date Prep: 04.29.2020
MB Sample Id: 7702382-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.29.2020 14:02	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124586 — Matrix: Soil — Date Prep: 04.29.2020
Parent Sample Id: 660149-001 — MS Sample Id: 660149-001 S — MSD Sample Id: 660149-001 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)	<50.3	1010	893	88	902	90	70-135	1	35	mg/kg	04.29.2020 15:24	
Diesel Range Organics (DRO)	70.5	1010	1030	95	1030	96	70-135	0	35	mg/kg	04.29.2020 15:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		111		70-135	%	04.29.2020 15:24
o-Terphenyl	114		112		70-135	%	04.29.2020 15:24

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

QC Summary 660189

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124578 Matrix: Solid Date Prep: 04.29.2020
MB Sample Id: 7702371-1-BLK LCS Sample Id: 7702371-1-BKS LCSD Sample Id: 7702371-1-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	0.107	107	0.111	111	70-130	4	35	mg/kg	04.30.2020 02:47	
Toluene	<0.00200	0.100	0.0968	97	0.0983	98	70-130	2	35	mg/kg	04.30.2020 02:47	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.0916	92	71-129	2	35	mg/kg	04.30.2020 02:47	
m,p-Xylenes	<0.00400	0.200	0.175	88	0.177	89	70-135	1	35	mg/kg	04.30.2020 02:47	
o-Xylene	<0.00200	0.100	0.0911	91	0.0923	92	71-133	1	35	mg/kg	04.30.2020 02:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		109		110		70-130	%	04.30.2020 02:47
4-Bromofluorobenzene	102		99		100		70-130	%	04.30.2020 02:47

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124578 Matrix: Soil Date Prep: 04.29.2020
Parent Sample Id: 660189-001 MS Sample Id: 660189-001 S MSD Sample Id: 660189-001 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	0.106	106	0.106	106	70-130	0	35	mg/kg	04.30.2020 03:30	
Toluene	<0.00200	0.100	0.0944	94	0.0958	96	70-130	1	35	mg/kg	04.30.2020 03:30	
Ethylbenzene	<0.00200	0.100	0.0877	88	0.0870	87	71-129	1	35	mg/kg	04.30.2020 03:30	
m,p-Xylenes	<0.00401	0.200	0.170	85	0.168	84	70-135	1	35	mg/kg	04.30.2020 03:30	
o-Xylene	<0.00200	0.100	0.0884	88	0.0889	89	71-133	1	35	mg/kg	04.30.2020 03:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		108		70-130	%	04.30.2020 03:30
4-Bromofluorobenzene	101		102		70-130	%	04.30.2020 03:30

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Page 107 of 171

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 620189

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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine ☑	
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT			
Temperature (°C):	1.6	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	T-NM-007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	3

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA O=8021)	Chloride (EPA 300.0)
	SW08	R	4/29/20	1003	0-8'	1	X	X	X
	SW03	R	4/29/20	1036	0-8'	1	X	X	X
	FS14	R	4/29/20	1442	8'	1	X	X	X

Pres. Code

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

gypsum
"
"

ANALYSIS REQUEST

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/29/20 1557	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM
Final 1.000
Page 15 of 16

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.29.2020 03.57.00 PM

Work Order #: 660189

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.29.2020

Checklist reviewed by: Jessica Kramer Date: 04.30.2020

Jessica Kramer

Certificate of Analysis Summary 660561

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 05.05.2020 09:33
Report Date: 05.07.2020 11:41
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660561-001		660561-002		660561-003		660561-004		660561-005		660561-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	13- ft		13- ft		13- ft		8- ft		8- ft		8- ft	
	Matrix:	SOLID		SOLID		SOLID		SOLID		SOLID		SOLID	
	Sampled:	05.04.2020 14:12		05.04.2020 14:15		05.04.2020 14:20		05.04.2020 10:23		05.04.2020 10:21		05.04.2020 09:12	
BTEX by EPA 8021B	***Extracted:***	05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00	
	Analyzed:	05.06.2020 03:39		05.06.2020 04:01		05.06.2020 04:22		05.06.2020 04:44		05.06.2020 05:05		05.06.2020 05:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00400	0.00400	<0.00401	0.00401	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09	
	Analyzed:	05.05.2020 12:27		05.05.2020 15:43		05.05.2020 12:51		05.05.2020 12:57		05.05.2020 13:04		05.05.2020 15:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		70.9	49.7	38.2	9.96	96.9	49.9	1030	49.8	53.8	50.1	20.0	9.98
TPH by SW8015 Mod	***Extracted:***	05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30	
	Analyzed:	05.06.2020 04:53		05.06.2020 05:54		05.06.2020 06:15		05.06.2020 06:35		05.06.2020 06:55		05.06.2020 07:16	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.0	50.0	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.2	50.2
Diesel Range Organics (DRO)		<49.9	49.9	<50.0	50.0	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.0	50.0	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.2	50.2
Total GRO-DRO		<49.9	49.9	<50.0	50.0	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.2	50.2
Total TPH		<49.9	49.9	<50.0	50.0	<50.1	50.1	<50.0	50.0	<50.1	50.1	<50.2	50.2

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

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 660561

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 05.05.2020 09:33
Report Date: 05.07.2020 11:41
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	660561-007		660561-008		660561-009		660561-010		660561-011		660561-012	
	Field Id:	FS07		FS08		FS019		FS10		FS11		FS12	
	Depth:	8- ft		8- ft		8- ft		8- ft		8- ft		8- ft	
	Matrix:	SOLID		SOLID		SOLID		SOLID		SOLID		SOLID	
	Sampled:	05.04.2020 09:07		05.04.2020 15:30		05.04.2020 16:10		05.04.2020 16:18		05.04.2020 16:20		05.04.2020 13:44	
BTEX by EPA 8021B	***Extracted:***	05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00		05.05.2020 20:00	
	Analyzed:	05.06.2020 05:48		05.06.2020 06:09		05.06.2020 06:30		05.06.2020 06:52		05.06.2020 07:56		05.06.2020 08:17	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401	<0.00400	0.00400	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09		05.05.2020 10:09	
	Analyzed:	05.05.2020 13:45		05.05.2020 13:52		05.05.2020 13:58		05.05.2020 14:05		05.05.2020 14:11		05.05.2020 14:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2200	49.7	276	49.9	285	50.1	72.5	49.8	141	49.9	66.2	49.5
TPH by SW8015 Mod	***Extracted:***	05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30		05.05.2020 17:30	
	Analyzed:	05.06.2020 07:36		05.06.2020 07:57		05.06.2020 08:17		05.06.2020 08:38		05.06.2020 10:36		05.06.2020 11:16	
	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	<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.2	50.2	<50.1	50.1
Diesel Range Organics (DRO)		<50.0	50.0	<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.2	50.2	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.2	50.2	<50.1	50.1
Total GRO-DRO		<50.0	50.0	<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.2	50.2	<50.1	50.1
Total TPH		<50.0	50.0	<50.3	50.3	<49.9	49.9	<49.9	49.9	<50.2	50.2	<50.1	50.1

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

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 660561

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 05.05.2020 09:33
Report Date: 05.07.2020 11:41
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	660561-013					
	Field Id:	FS13					
	Depth:	8- ft					
	Matrix:	SOLID					
	Sampled:	05.04.2020 13:40					
BTEX by EPA 8021B	***Extracted:***	05.05.2020 20:00					
	Analyzed:	05.06.2020 09:32					
	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:***	05.05.2020 10:09					
	Analyzed:	05.05.2020 14:38					
	Units/RL:	mg/kg	RL				
Chloride		120	49.6				
TPH by SW8015 Mod	***Extracted:***	05.05.2020 17:30					
	Analyzed:	05.06.2020 11:37					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8				
Total GRO-DRO		<49.8	49.8				
Total TPH		<49.8	49.8				

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

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

Jessica Kramer
Project Manager

Analytical Report 660561

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

05.07.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.07.2020

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

Reference: XENCO Report No(s): **660561**
Nash Deep 18-16
Project Address: Eddy County

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) 660561. 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. 660561 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	05.04.2020 14:12	13 ft	660561-001
FS02	S	05.04.2020 14:15	13 ft	660561-002
FS03	S	05.04.2020 14:20	13 ft	660561-003
FS04	S	05.04.2020 10:23	8 ft	660561-004
FS05	S	05.04.2020 10:21	8 ft	660561-005
FS06	S	05.04.2020 09:12	8 ft	660561-006
FS07	S	05.04.2020 09:07	8 ft	660561-007
FS08	S	05.04.2020 15:30	8 ft	660561-008
FS019	S	05.04.2020 16:10	8 ft	660561-009
FS10	S	05.04.2020 16:18	8 ft	660561-010
FS11	S	05.04.2020 16:20	8 ft	660561-011
FS12	S	05.04.2020 13:44	8 ft	660561-012
FS13	S	05.04.2020 13:40	8 ft	660561-013

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *660561*

Report Date: *05.07.2020*
Date Received: *05.05.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS01**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-001	Date Collected:	05.04.2020 14:12	Sample Depth:	13 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.9**	49.7	mg/kg	05.05.2020 12:27		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.06.2020 04:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.06.2020 04:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.06.2020 04:53	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	05.06.2020 04:53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.06.2020 04:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.06.2020 04:53	
o-Terphenyl	84-15-1	95	%	70-135	05.06.2020 04:53	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS01**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-001	Date Collected:	05.04.2020 14:12	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.06.2020 03:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 03:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.06.2020 03:39	
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 03:39	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS02**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-002	Date Collected:	05.04.2020 14:15	Sample Depth:	13 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**38.2**	9.96	mg/kg	05.05.2020 15:43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.06.2020 05:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.06.2020 05:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.06.2020 05:54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	05.06.2020 05:54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.06.2020 05:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	05.06.2020 05:54	
o-Terphenyl	84-15-1	85	%	70-135	05.06.2020 05:54	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS02**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-002	Date Collected:	05.04.2020 14:15	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.06.2020 04:01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 04:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	05.06.2020 04:01	
4-Bromofluorobenzene	460-00-4	111	%	70-130	05.06.2020 04:01	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS03**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-003	Date Collected:	05.04.2020 14:20	Sample Depth:	13 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**96.9**	49.9	mg/kg	05.05.2020 12:51		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 06:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.06.2020 06:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 06:15	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.06.2020 06:15	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.06.2020 06:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	05.06.2020 06:15	
o-Terphenyl	84-15-1	87	%	70-135	05.06.2020 06:15	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS03**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-003	Date Collected:	05.04.2020 14:20	Sample Depth:	13 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.06.2020 04:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 04:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.06.2020 04:22	
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 04:22	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-004	Date Collected:	05.04.2020 10:23	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1030**	49.8	mg/kg	05.05.2020 12:57		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.06.2020 06:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.06.2020 06:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.06.2020 06:35	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	05.06.2020 06:35	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.06.2020 06:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	05.06.2020 06:35	
o-Terphenyl	84-15-1	87	%	70-135	05.06.2020 06:35	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-004	Date Collected:	05.04.2020 10:23	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.06.2020 04:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 04:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 04:44	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.06.2020 04:44	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS05**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-005	Date Collected:	05.04.2020 10:21	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.8**	50.1	mg/kg	05.05.2020 13:04		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 06:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.06.2020 06:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 06:55	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.06.2020 06:55	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.06.2020 06:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	05.06.2020 06:55	
o-Terphenyl	84-15-1	87	%	70-135	05.06.2020 06:55	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS05**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-005	Date Collected:	05.04.2020 10:21	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.06.2020 05:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 05:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	05.06.2020 05:05	
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.06.2020 05:05	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS06**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-006	Date Collected:	05.04.2020 09:12	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.0**	9.98	mg/kg	05.05.2020 15:50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 07:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.06.2020 07:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.06.2020 07:16	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.06.2020 07:16	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.06.2020 07:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	05.06.2020 07:16	
o-Terphenyl	84-15-1	89	%	70-135	05.06.2020 07:16	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS06**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-006	Date Collected:	05.04.2020 09:12	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.06.2020 05:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.06.2020 05:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	05.06.2020 05:26	
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.06.2020 05:26	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS07**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-007	Date Collected:	05.04.2020 09:07	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2200**	49.7	mg/kg	05.05.2020 13:45		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	05.06.2020 07:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	05.06.2020 07:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	05.06.2020 07:36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	05.06.2020 07:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	05.06.2020 07:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.06.2020 07:36	
o-Terphenyl	84-15-1	91	%	70-135	05.06.2020 07:36	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS07**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-007	Date Collected:	05.04.2020 09:07	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.06.2020 05:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 05:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.06.2020 05:48	
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 05:48	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS08**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-008	Date Collected:	05.04.2020 15:30	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**276**	49.9	mg/kg	05.05.2020 13:52		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.06.2020 07:57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.06.2020 07:57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.06.2020 07:57	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.06.2020 07:57	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.06.2020 07:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.06.2020 07:57	
o-Terphenyl	84-15-1	92	%	70-135	05.06.2020 07:57	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS08**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-008	Date Collected:	05.04.2020 15:30	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.06.2020 06:09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 06:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.06.2020 06:09	
4-Bromofluorobenzene	460-00-4	107	%	70-130	05.06.2020 06:09	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS019**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-009	Date Collected:	05.04.2020 16:10	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**285**	50.1	mg/kg	05.05.2020 13:58		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.06.2020 08:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.06.2020 08:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.06.2020 08:17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	05.06.2020 08:17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.06.2020 08:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.06.2020 08:17	
o-Terphenyl	84-15-1	90	%	70-135	05.06.2020 08:17	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS019**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-009	Date Collected:	05.04.2020 16:10	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.06.2020 06:30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.06.2020 06:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	05.06.2020 06:30	
1,4-Difluorobenzene	540-36-3	116	%	70-130	05.06.2020 06:30	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS10**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-010	Date Collected:	05.04.2020 16:18	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**72.5**	49.8	mg/kg	05.05.2020 14:05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.06.2020 08:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.06.2020 08:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.06.2020 08:38	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	05.06.2020 08:38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.06.2020 08:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	05.06.2020 08:38	
o-Terphenyl	84-15-1	88	%	70-135	05.06.2020 08:38	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS10**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-010	Date Collected:	05.04.2020 16:18	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.06.2020 06:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 06:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 06:52	
1,4-Difluorobenzene	540-36-3	114	%	70-130	05.06.2020 06:52	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS11**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-011	Date Collected:	05.04.2020 16:20	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**141**	49.9	mg/kg	05.05.2020 14:11		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.06.2020 10:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.06.2020 10:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.06.2020 10:36	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.06.2020 10:36	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.06.2020 10:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	05.06.2020 10:36	
o-Terphenyl	84-15-1	96	%	70-135	05.06.2020 10:36	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS11**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-011	Date Collected:	05.04.2020 16:20	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.06.2020 07:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 07:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	05.06.2020 07:56	
1,4-Difluorobenzene	540-36-3	115	%	70-130	05.06.2020 07:56	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS12**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-012	Date Collected:	05.04.2020 13:44	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.2**	49.5	mg/kg	05.05.2020 14:31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	05.06.2020 11:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	05.06.2020 11:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	05.06.2020 11:16	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	05.06.2020 11:16	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	05.06.2020 11:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.06.2020 11:16	
o-Terphenyl	84-15-1	92	%	70-135	05.06.2020 11:16	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS12**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-012	Date Collected:	05.04.2020 13:44	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.06.2020 08:17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.06.2020 08:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.06.2020 08:17	
1,4-Difluorobenzene	540-36-3	113	%	70-130	05.06.2020 08:17	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS13**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-013	Date Collected:	05.04.2020 13:40	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 10:09	Basis:	Wet Weight
Seq Number:	3125106				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	49.6	mg/kg	05.05.2020 14:38		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.05.2020 17:30	Basis:	Wet Weight
Seq Number:	3125221				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	05.06.2020 11:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	05.06.2020 11:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	05.06.2020 11:37	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	05.06.2020 11:37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	05.06.2020 11:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.06.2020 11:37	
o-Terphenyl	84-15-1	89	%	70-135	05.06.2020 11:37	

Certificate of Analytical Results 660561

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS13**	Matrix:	Solid	Date Received:	05.05.2020 09:33
Lab Sample Id:	660561-013	Date Collected:	05.04.2020 13:40	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.05.2020 20:00	Basis:	Wet Weight
Seq Number:	3125198				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.06.2020 09:32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.06.2020 09:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	05.06.2020 09:32	
1,4-Difluorobenzene	540-36-3	116	%	70-130	05.06.2020 09:32	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 660561

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125106 — Matrix: Solid — Date Prep: 05.05.2020
MB Sample Id: 7702708-1-BLK — LCS Sample Id: 7702708-1-BKS — LCSD Sample Id: 7702708-1-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	250	100	90-110	0	20	mg/kg	05.05.2020 12:15	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125106 — Matrix: Solid — Date Prep: 05.05.2020
Parent Sample Id: 660561-001 — MS Sample Id: 660561-001 S — MSD Sample Id: 660561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.9	199	259	95	257	94	90-110	1	20	mg/kg	05.05.2020 12:33	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125106 — Matrix: Solid — Date Prep: 05.05.2020
Parent Sample Id: 660561-011 — MS Sample Id: 660561-011 S — MSD Sample Id: 660561-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	200	331	95	326	93	90-110	2	20	mg/kg	05.05.2020 14:18	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125221 — Matrix: Solid — Date Prep: 05.05.2020
MB Sample Id: 7702804-1-BLK — LCS Sample Id: 7702804-1-BKS — LCSD Sample Id: 7702804-1-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	912	91	875	88	70-135	4	35	mg/kg	05.06.2020 04:12	
Diesel Range Organics (DRO)	<50.0	1000	939	94	887	89	70-135	6	35	mg/kg	05.06.2020 04:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		97		104		70-135	%	05.06.2020 04:12
o-Terphenyl	82		85		81		70-135	%	05.06.2020 04:12

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125221 — Matrix: Solid — Date Prep: 05.05.2020
MB Sample Id: 7702804-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.06.2020 03:52	

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 660561

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3125221 Matrix: Solid Date Prep: 05.05.2020
Parent Sample Id: 660561-001 MS Sample Id: 660561-001 S MSD Sample Id: 660561-001 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)	<50.3	1010	1150	114	1120	112	70-135	3	35	mg/kg	05.06.2020 05:14	
Diesel Range Organics (DRO)	<50.3	1010	1110	110	1200	120	70-135	8	35	mg/kg	05.06.2020 05:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		114		70-135	%	05.06.2020 05:14
o-Terphenyl	104		102		70-135	%	05.06.2020 05:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125198 Matrix: Solid Date Prep: 05.05.2020
MB Sample Id: 7702756-1-BLK LCS Sample Id: 7702756-1-BKS LCSD Sample Id: 7702756-1-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	0.113	113	0.107	107	70-130	5	35	mg/kg	05.06.2020 01:53	
Toluene	<0.00200	0.100	0.101	101	0.0945	95	70-130	7	35	mg/kg	05.06.2020 01:53	
Ethylbenzene	<0.00200	0.100	0.0937	94	0.0860	86	71-129	9	35	mg/kg	05.06.2020 01:53	
m,p-Xylenes	<0.00400	0.200	0.180	90	0.164	82	70-135	9	35	mg/kg	05.06.2020 01:53	
o-Xylene	<0.00200	0.100	0.0943	94	0.0878	88	71-133	7	35	mg/kg	05.06.2020 01:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	116		109		109		70-130	%	05.06.2020 01:53
4-Bromofluorobenzene	105		99		98		70-130	%	05.06.2020 01:53

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3125198 Matrix: Solid Date Prep: 05.05.2020
Parent Sample Id: 660561-001 MS Sample Id: 660561-001 S MSD Sample Id: 660561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.127	128	0.129	128	70-130	2	35	mg/kg	05.06.2020 02:35	
Toluene	<0.00199	0.0996	0.128	129	0.124	123	70-130	3	35	mg/kg	05.06.2020 02:35	
Ethylbenzene	<0.00199	0.0996	0.128	129	0.119	118	71-129	7	35	mg/kg	05.06.2020 02:35	
m,p-Xylenes	<0.00398	0.199	0.246	124	0.258	128	70-135	5	35	mg/kg	05.06.2020 02:35	
o-Xylene	<0.00199	0.0996	0.128	129	0.133	132	71-133	4	35	mg/kg	05.06.2020 02:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		108		70-130	%	05.06.2020 02:35
4-Bromofluorobenzene	102		101		70-130	%	05.06.2020 02:35

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

Page 145 of 171

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 20E05561

Page 1 of 2

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

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine	☑
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.6	Thermometer ID	TNH007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	13

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Pres. Code	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	FS01	R	5/4/20	1412	13'		1	X	X	X	
	FS02			1415	13'						
	FS03			1420	13'						
	FS04			1023	8'						
	FS05			1021	8'						
	FS06			0912	8'						
	FS07			0907	8'						
	FS08			1530	8'						
	FS09			1610	8'						
	FS10	↓	↓	1618	8'	↓	↓	↓	↓	↓	

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be analyzed

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Fatima Smith		5/5/20 09:33	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM
Final 1.000
Page 37 of 38

Page 146 of 171

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 1e1205e1

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine ☑	
Project Location	Eddy county	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT

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

ANALYSIS REQUEST

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	FS11	R	5/4/20	1620	8'	1		X	X	X
	FS12	R	5/4/20	1344	8'	1		X	X	X
	FS13	R	5/4/20	1340	8'	1		X	X	X

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/5/20 09:33	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM

Final 1.000

Page 38 of 38

Certificate of Analysis Summary 661479

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 05.13.2020 14:03
Report Date: 05.14.2020 12:26
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	661479-001		661479-002					
	Field Id:	FS04A		FS07A					
	Depth:	8.5- ft		8.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	05.13.2020 12:16		05.13.2020 12:20					
BTEX by EPA 8021B	***Extracted:***	05.13.2020 17:06		05.13.2020 17:06					
	Analyzed:	05.13.2020 19:22		05.13.2020 19:42					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00199	0.00199				
Toluene		<0.00202	0.00202	<0.00199	0.00199				
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199				
m,p-Xylenes		<0.00404	0.00404	<0.00398	0.00398				
o-Xylene		<0.00202	0.00202	<0.00199	0.00199				
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199				
Total BTEX		<0.00202	0.00202	<0.00199	0.00199				
Chloride by EPA 300	***Extracted:***	05.13.2020 16:00		05.13.2020 16:00					
	Analyzed:	05.13.2020 17:42		05.13.2020 17:48					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		707	99.8	184	100				
TPH by SW8015 Mod	***Extracted:***	05.13.2020 17:30		05.13.2020 17:30					
	Analyzed:	05.14.2020 04:17		05.14.2020 04:38					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.2	50.2				
Diesel Range Organics (DRO)		<49.9	49.9	<50.2	50.2				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.2	50.2				
Total GRO-DRO		<49.9	49.9	<50.2	50.2				
Total TPH		<49.9	49.9	<50.2	50.2				

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

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

Jessica Kramer
Project Manager

Analytical Report 661479

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

05.14.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05.14.2020

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

Reference: XENCO Report No(s): **661479**
Nash Deep 18-16
Project Address: Eddy County

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) 661479. 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. 661479 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 661479

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04A	S	05.13.2020 12:16	8.5 ft	661479-001
FS07A	S	05.13.2020 12:20	8.5 ft	661479-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *661479*

Report Date: *05.14.2020*
Date Received: *05.13.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 661479

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	05.13.2020 14:03
Lab Sample Id:	661479-001	Date Collected:	05.13.2020 12:16	Sample Depth:	8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.13.2020 16:00	Basis:	Wet Weight
Seq Number:	3125881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**707**	99.8	mg/kg	05.13.2020 17:42		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.13.2020 17:30	Basis:	Wet Weight
Seq Number:	3125891				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	05.14.2020 04:17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	05.14.2020 04:17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	05.14.2020 04:17	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	05.14.2020 04:17	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	05.14.2020 04:17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	05.14.2020 04:17	
o-Terphenyl	84-15-1	119	%	70-135	05.14.2020 04:17	

Certificate of Analytical Results 661479

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04A**	Matrix:	Soil	Date Received:	05.13.2020 14:03
Lab Sample Id:	661479-001	Date Collected:	05.13.2020 12:16	Sample Depth:	8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.13.2020 17:06	Basis:	Wet Weight
Seq Number:	3125871				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	05.13.2020 19:22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.13.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.13.2020 19:22	
1,4-Difluorobenzene	540-36-3	106	%	70-130	05.13.2020 19:22	

Certificate of Analytical Results 661479

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS07A**	Matrix:	Soil	Date Received:	05.13.2020 14:03
Lab Sample Id:	661479-002	Date Collected:	05.13.2020 12:20	Sample Depth:	8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.13.2020 16:00	Basis:	Wet Weight
Seq Number:	3125881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	100	mg/kg	05.13.2020 17:48		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.13.2020 17:30	Basis:	Wet Weight
Seq Number:	3125891				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	05.14.2020 04:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	05.14.2020 04:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	05.14.2020 04:38	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	05.14.2020 04:38	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	05.14.2020 04:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	05.14.2020 04:38	
o-Terphenyl	84-15-1	116	%	70-135	05.14.2020 04:38	

Certificate of Analytical Results 661479

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS07A**	Matrix:	Soil	Date Received:	05.13.2020 14:03
Lab Sample Id:	661479-002	Date Collected:	05.13.2020 12:20	Sample Depth:	8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.13.2020 17:06	Basis:	Wet Weight
Seq Number:	3125871				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.13.2020 19:42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.13.2020 19:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	05.13.2020 19:42	
1,4-Difluorobenzene	540-36-3	108	%	70-130	05.13.2020 19:42	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 661479

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125881 — Matrix: Solid — Date Prep: 05.13.2020
MB Sample Id: 7703271-1-BLK — LCS Sample Id: 7703271-1-BKS — LCSD Sample Id: 7703271-1-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	250	100	90-110	0	20	mg/kg	05.13.2020 15:51	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125881 — Matrix: Soil — Date Prep: 05.13.2020
Parent Sample Id: 661356-020 — MS Sample Id: 661356-020 S — MSD Sample Id: 661356-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	123	200	312	95	312	94	90-110	0	20	mg/kg	05.13.2020 16:08	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3125881 — Matrix: Soil — Date Prep: 05.13.2020
Parent Sample Id: 661356-030 — MS Sample Id: 661356-030 S — MSD Sample Id: 661356-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.6	200	215	93	216	94	90-110	0	20	mg/kg	05.13.2020 17:30	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125891 — Matrix: Solid — Date Prep: 05.13.2020
MB Sample Id: 7703300-1-BLK — LCS Sample Id: 7703300-1-BKS — LCSD Sample Id: 7703300-1-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	905	91	903	90	70-135	0	35	mg/kg	05.13.2020 22:04	
Diesel Range Organics (DRO)	<50.0	1000	1050	105	1050	105	70-135	0	35	mg/kg	05.13.2020 22:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		116		114		70-135	%	05.13.2020 22:04
o-Terphenyl	110		116		116		70-135	%	05.13.2020 22:04

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3125891 — Matrix: Solid — Date Prep: 05.13.2020
MB Sample Id: 7703300-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.13.2020 21:43	

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 661479

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3125891 | Matrix: Soil | Date Prep: 05.13.2020
Parent Sample Id: 661488-001 | MS Sample Id: 661488-001 S | MSD Sample Id: 661488-001 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	954	95	914	91	70-135	4	35	mg/kg	05.13.2020 23:07	
Diesel Range Organics (DRO)	113	1000	1230	112	1170	106	70-135	5	35	mg/kg	05.13.2020 23:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		119		70-135	%	05.13.2020 23:07
o-Terphenyl	120		117		70-135	%	05.13.2020 23:07

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5035A
Seq Number: 3125871 | Matrix: Solid | Date Prep: 05.13.2020
MB Sample Id: 7703274-1-BLK | LCS Sample Id: 7703274-1-BKS | LCSD Sample Id: 7703274-1-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	0.108	108	0.106	106	70-130	2	35	mg/kg	05.13.2020 17:19	
Toluene	<0.00200	0.100	0.104	104	0.104	104	70-130	0	35	mg/kg	05.13.2020 17:19	
Ethylbenzene	<0.00200	0.100	0.0991	99	0.0982	98	71-129	1	35	mg/kg	05.13.2020 17:19	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.203	102	70-135	1	35	mg/kg	05.13.2020 17:19	
o-Xylene	<0.00200	0.100	0.104	104	0.102	102	71-133	2	35	mg/kg	05.13.2020 17:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		104		103		70-130	%	05.13.2020 17:19
4-Bromofluorobenzene	97		92		94		70-130	%	05.13.2020 17:19

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5035A
Seq Number: 3125871 | Matrix: Soil | Date Prep: 05.13.2020
Parent Sample Id: 661356-020 | MS Sample Id: 661356-020 S | MSD Sample Id: 661356-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.108	108	0.104	104	70-130	4	35	mg/kg	05.13.2020 18:00	
Toluene	<0.00200	0.0998	0.103	103	0.0998	100	70-130	3	35	mg/kg	05.13.2020 18:00	
Ethylbenzene	<0.00200	0.0998	0.0962	96	0.0920	92	71-129	4	35	mg/kg	05.13.2020 18:00	
m,p-Xylenes	<0.00399	0.200	0.198	99	0.188	94	70-135	5	35	mg/kg	05.13.2020 18:00	
o-Xylene	<0.00200	0.0998	0.100	100	0.0950	95	71-133	5	35	mg/kg	05.13.2020 18:00	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		109		70-130	%	05.13.2020 18:00
4-Bromofluorobenzene	95		95		70-130	%	05.13.2020 18:00

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Page 159 of 171

Chain of Custody

Work Order No: 620479

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 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

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

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	012920043	Routine ☐	
Project Location	Eddy county	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.6	Thermometer ID	THM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	2

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	FS04A	R	5/13/20	1216	8.5'	1		X	X	X	
	FS07A	R	5/13/20	1220	8.5'	1		X	X	X	

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

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

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/13/20 14:03	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:31 PM

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05.13.2020 02.03.00 PM

Work Order #: 661479

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 05.13.2020

Checklist reviewed by: Jessica Kramer Date: 05.14.2020

Certificate of Analysis Summary 662558

LT Environmental, Inc., Arvada, CO

Project Name: Nash Deep 18-16

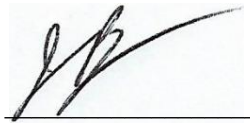
Project Id: 012920043
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Tue 05.26.2020 11:55
Report Date: 05.27.2020 13:23
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	662558-001					
	Field Id:	FS04B					
	Depth:	8.5- ft					
	Matrix:	SOIL					
	Sampled:	05.26.2020 09:55					
BTEX by EPA 8021B	***Extracted:***	05.26.2020 14:52					
	Analyzed:	05.26.2020 16:55					
	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:***	05.26.2020 15:00					
	Analyzed:	05.26.2020 15:43					
	Units/RL:	mg/kg RL					
Chloride		300 99.4					
TPH by SW8015 Mod	***Extracted:***	05.26.2020 13:45					
	Analyzed:	05.26.2020 14:09					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3					
Diesel Range Organics (DRO)		<50.3 50.3					
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3					
Total GRO-DRO		<50.3 50.3					
Total TPH		<50.3 50.3					

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

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



John Builes
Project Manager

Analytical Report 662558

for

LT Environmental, Inc.

Project Manager: Dan Moir

Nash Deep 18-16

012920043

05.27.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

05.27.2020

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

Reference: XENCO Report No(s): **662558**
Nash Deep 18-16
Project Address: Eddy County

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) 662558. 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. 662558 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

John Builes
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 662558

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04B	S	05.26.2020 09:55	8.5 ft	662558-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Nash Deep 18-16

Project ID: *012920043*
Work Order Number(s): *662558*

Report Date: *05.27.2020*
Date Received: *05.26.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 662558

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04B**	Matrix:	Soil	Date Received:	05.26.2020 11:55
Lab Sample Id:	662558-001	Date Collected:	05.26.2020 09:55	Sample Depth:	8.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.26.2020 15:00	Basis:	Wet Weight
Seq Number:	3127046				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**300**	99.4	mg/kg	05.26.2020 15:43		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	05.26.2020 13:45	Basis:	Wet Weight
Seq Number:	3127057				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	05.26.2020 14:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	05.26.2020 14:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	05.26.2020 14:09	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	05.26.2020 14:09	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	05.26.2020 14:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	05.26.2020 14:09	
o-Terphenyl	84-15-1	89	%	70-135	05.26.2020 14:09	

Certificate of Analytical Results 662558

LT Environmental, Inc., Arvada, CO

Nash Deep 18-16

Sample Id:	**FS04B**	Matrix:	Soil	Date Received:	05.26.2020 11:55
Lab Sample Id:	662558-001	Date Collected:	05.26.2020 09:55	Sample Depth:	8.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	05.26.2020 14:52	Basis:	Wet Weight
Seq Number:	3127038				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.26.2020 16:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.26.2020 16:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	110	%	70-130	05.26.2020 16:55	
4-Bromofluorobenzene	460-00-4	93	%	70-130	05.26.2020 16:55	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 662558

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3127046 — Matrix: Solid — Date Prep: 05.26.2020
MB Sample Id: 7704078-1-BLK — LCS Sample Id: 7704078-1-BKS — LCSD Sample Id: 7704078-1-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	250	100	250	100	90-110	0	20	mg/kg	05.26.2020 15:31	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3127046 — Matrix: Soil — Date Prep: 05.26.2020
Parent Sample Id: 662558-001 — MS Sample Id: 662558-001 S — MSD Sample Id: 662558-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	300	199	495	98	486	93	90-110	2	20	mg/kg	05.26.2020 15:49	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3127046 — Matrix: Soil — Date Prep: 05.26.2020
Parent Sample Id: 662565-010 — MS Sample Id: 662565-010 S — MSD Sample Id: 662565-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	200	198	99	198	99	90-110	0	20	mg/kg	05.26.2020 17:11	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127057 — Matrix: Solid — Date Prep: 05.26.2020
MB Sample Id: 7704132-1-BLK — LCS Sample Id: 7704132-1-BKS — LCSD Sample Id: 7704132-1-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	959	96	940	94	70-135	2	35	mg/kg	05.26.2020 12:42	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1090	109	70-135	1	35	mg/kg	05.26.2020 12:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		132		128		70-135	%	05.26.2020 12:42
o-Terphenyl	124		126		133		70-135	%	05.26.2020 12:42

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3127057 — Matrix: Solid — Date Prep: 05.26.2020
MB Sample Id: 7704132-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	05.26.2020 12:22	

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 662558

LT Environmental, Inc.

Nash Deep 18-16

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3127057 Matrix: Soil Date Prep: 05.26.2020
Parent Sample Id: 662558-001 MS Sample Id: 662558-001 S MSD Sample Id: 662558-001 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	871	87	872	86	70-135	0	35	mg/kg	05.26.2020 14:29	
Diesel Range Organics (DRO)	<50.2	1000	1010	101	1000	99	70-135	1	35	mg/kg	05.26.2020 14:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		100		70-135	%	05.26.2020 14:29
o-Terphenyl	104		100		70-135	%	05.26.2020 14:29

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3127038 Matrix: Solid Date Prep: 05.26.2020
MB Sample Id: 7704075-1-BLK LCS Sample Id: 7704075-1-BKS LCSD Sample Id: 7704075-1-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	0.108	108	0.109	109	70-130	1	35	mg/kg	05.26.2020 15:13	
Toluene	<0.00200	0.100	0.102	102	0.104	104	70-130	2	35	mg/kg	05.26.2020 15:13	
Ethylbenzene	<0.00200	0.100	0.0938	94	0.0944	94	71-129	1	35	mg/kg	05.26.2020 15:13	
m,p-Xylenes	<0.00400	0.200	0.190	95	0.190	95	70-135	0	35	mg/kg	05.26.2020 15:13	
o-Xylene	<0.00200	0.100	0.0984	98	0.0997	100	71-133	1	35	mg/kg	05.26.2020 15:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	109		104		106		70-130	%	05.26.2020 15:13
4-Bromofluorobenzene	95		89		90		70-130	%	05.26.2020 15:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3127038 Matrix: Soil Date Prep: 05.26.2020
Parent Sample Id: 662558-001 MS Sample Id: 662558-001 S MSD Sample Id: 662558-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.121	121	0.113	113	70-130	7	35	mg/kg	05.26.2020 15:53	
Toluene	<0.00200	0.0998	0.116	116	0.108	108	70-130	7	35	mg/kg	05.26.2020 15:53	
Ethylbenzene	<0.00200	0.0998	0.109	109	0.103	103	71-129	6	35	mg/kg	05.26.2020 15:53	
m,p-Xylenes	<0.00399	0.200	0.222	111	0.210	105	70-135	6	35	mg/kg	05.26.2020 15:53	
o-Xylene	<0.00200	0.0998	0.112	112	0.104	104	71-133	7	35	mg/kg	05.26.2020 15:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		107		70-130	%	05.26.2020 15:53
4-Bromofluorobenzene	87		94		70-130	%	05.26.2020 15:53

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

Page 171 of 171

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 20e2558

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, Inc.
Address:	3300 North A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	fsmith@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	Nash Deep 18-16	Turn Around	
Project Number:	01929043	Routine ☐	
Project Location	Eddy county	Rush: 24hrs	
Sampler's Name:	Fatima Smith	Due Date:	
PO #:	3/24/20 spill date	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.6	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:	1

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	FS04B	R	5/26/20	0955	0.5'	1		X	X	X

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/26/20 1155	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Received by OCD: 6/18/2020 1:24:37 PM
Final 1.000
Page 11 of 11