

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	NRM1926960363
District RP	1RP-5696
Facility ID	
Application ID	pRM1926960506

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 32.425399° Longitude -103.128091°
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	New Mexico S State #35	Site Type	Production Well Facility flow line
Date Release Discovered	8/27/2019	API# (if applicable)	30-025-25381

Unit Letter	Section	Township	Range	County
A	2	22S	37E	Lea

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 0.17	Volume Recovered (bbls) 0
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 8.15	Volume Recovered (bbls) 0
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A hole developed in the 2 inch steel flow line due to external corrosion and fluids escaped to the pasture. The flow line was isolated for repairs. Additional third party resources have been retained to assist with remediation.

Form C-141

State of New Mexico
Oil Conservation Division

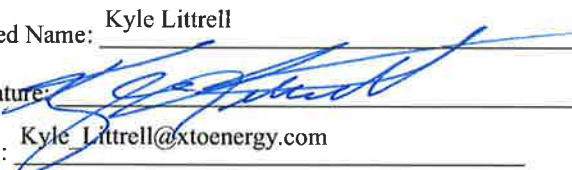
Page 2

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

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: There was no secondary containment. No free fluids remained to be removed and managed.	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u> Signature:  email: <u>Kyle.Littrell@xtoenergy.com</u>	Title: <u>SH&E Supervisor</u> Date: <u>9/6/2019</u> Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>09/26/2019</u>	

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>50-100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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

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

Printed Name: Kyle Littrell Title: SH&E SupervisorSignature:  Date: 03/23/2020email: Kyle_Littrell@xtoenergy.com Telephone: (432)-221-7331**OCD Only**

Received by: _____ Date: _____

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Closure

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 03/23/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

March 23, 2020

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

**RE: Closure Request
New Mexico S State #35
Remediation Permit Number 1RP-5696
Incident Number NRM1926960363
Lea County, New Mexico**

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the New Mexico S State #35 (Site) located in Unit A, Section 2, Township 22 South, Range 37 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impacts to soil following the release of produced water and crude oil at the Site. Based on field observations, field screenings, and laboratory analytical results following excavation activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Remediation Permit (RP) Number 1RP-5696 and Incident Number NRM1926960363.

RELEASE BACKGROUND

On August 27, 2019, a 2-inch steel flow line developed a hole, resulting in the release of 8.15 barrels (bbls) of produced water and 0.17 bbls of crude oil into the surrounding pasture. The section of the flow line was repaired. No fluids were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on September 6, 2019 and subsequently assigned Remediation Permit (RP) Number 1RP-5696 and Incident Number NRM1926960363.

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 between 50 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) well number 322532103073601, located approximately 312 feet northeast of the Site. The



groundwater well has a depth to groundwater of 59 feet bgs and a total depth of 85 feet bgs. Ground surface elevation at the water well location is 3,359 feet above mean sea level (amsl), which is approximately 5 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is freshwater pond located approximately 1.21 miles northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not located within an unstable geological area (low-potential karst designation area). The Site receptors are identified on Figure 1.

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)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

Additionally, reclamation of the affected pasture area must be comprised of non-waste containing earthen material exhibiting chloride concentrations below 600 mg/kg, which was applied per NMAC 19.15.29.13.D (1) to the top 4 feet.

SITE ASSESSMENT ACTIVITIES

On September 10, 2019, 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 three preliminary soil samples (SS01 and SS03) at a depth of approximately 0.5 feet bgs to assess the lateral extent of affected surface soil. Preliminary soil samples SS01 and SS02 was collected near the release location within the release extent and preliminary soil sample SS03 was collected outside the release extent. 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. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photo documentation of the release was conducted, and a photographic log of the Site and the remediation work is included as Attachment 1.



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, TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on the laboratory analytical results for the preliminary soil samples SS01 through SS03, soil within the release extent did not appear to be impacted above the Closure Criteria; however, excavation activities did appear to be warranted to meet the reclamation requirement. Additional assessment activities were scheduled to further confirm the presence or absence of impacted soil at depth. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1. The laboratory analytical report is included in Attachment 2.

Delineation and remediation efforts were postponed pending pasture disturbance approval. A Right of Entry (ROE) Permit was submitted to the New Mexico State Land Office (NMSLO) on October 2, 2019. The executed permit was received February 17, 2020. Per NMAC 19.15.29.12.B.(1), an extension for submission of a remediation plan or closure report was requested on November 18, 2019 and approved on November 20, 2019, by NMOCD District I office extending the deadline to March 27, 2020.

On March 9, 2020, LTE personnel returned to the Site to oversee excavation of impacted soil. Three boreholes (BH01 through BH03) were advanced via hand auger, to a depth of approximately 2 feet to 4 feet bgs. Boreholes BH01 through BH03 were advanced in the vicinity of preliminary soil samples SS01 through SS03, respectively. Field screening results and observations for each borehole were documented on lithologic/soil sampling logs and are included as Attachment 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico.

Laboratory analytical results of soil from the three boreholes indicated all soil within the release extent was in compliance with the Closure Criteria and waste containing soil was limited to less than 3 feet bgs.

EXCAVATION ACTIVITIES

To achieve the reclamation requirement, LTE personnel oversaw two small excavations with a track-mounted backhoe on March 9, 2020. Following removal of waste-containing soil, LTE collected 5-point composite soil samples on a 200 square foot frequency from the sidewalls and floor of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by



thoroughly mixing. A total of four composite floor soil samples (FS01 through FS04) and four composite sidewall samples (SW01 through SW04) were collected from the excavations. Floor samples were collected at a depth of approximately 1-foot and 3 feet bgs and sidewall samples were collected at depths ranging from ground surface to approximately 3 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Carlsbad, New Mexico. The excavation extent and excavation soil sample locations are depicted on Figure 3 and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 2.

Overall, excavation of impacted soil encompassed an area of approximately 797 square feet in the pasture. A total volume of approximately 65 cubic yards of impacted soil was removed from the Site. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico.

CONCLUSIONS

Preliminary soil samples SS01 and SS02 were collected near the release location within the release extent and preliminary soil sample SS03 was collected outside the release extent. Soil samples indicated chloride concentrations in SS02 and SS03 were below the Closure Criteria, but exceeded the reclamation criteria, applied per NMAC 19.15.29.13.D (1) to the top 4 feet. Based on the analytical results, the area was excavated, removing waste containing soils from the surface to depths ranging from approximately 1 foot to 3 feet bgs. Laboratory analytical results for the final confirmation soil samples collected within the final excavation extent indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and meet the reclamation requirement in the top 4 feet. Overall, the excavation encompassed an area of approximately 797 square feet and a total volume of approximately 65 cubic yards of soil were removed. Based on field activities and laboratory analytical results of confirmation samples within the release extent, XTO respectfully requests NFA for RP Number 1RP-5696 and Incident Number NRM1926960363.

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

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Kaeli Jennings'.

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



District 1
Page 5

Kalei Jennings
Project Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

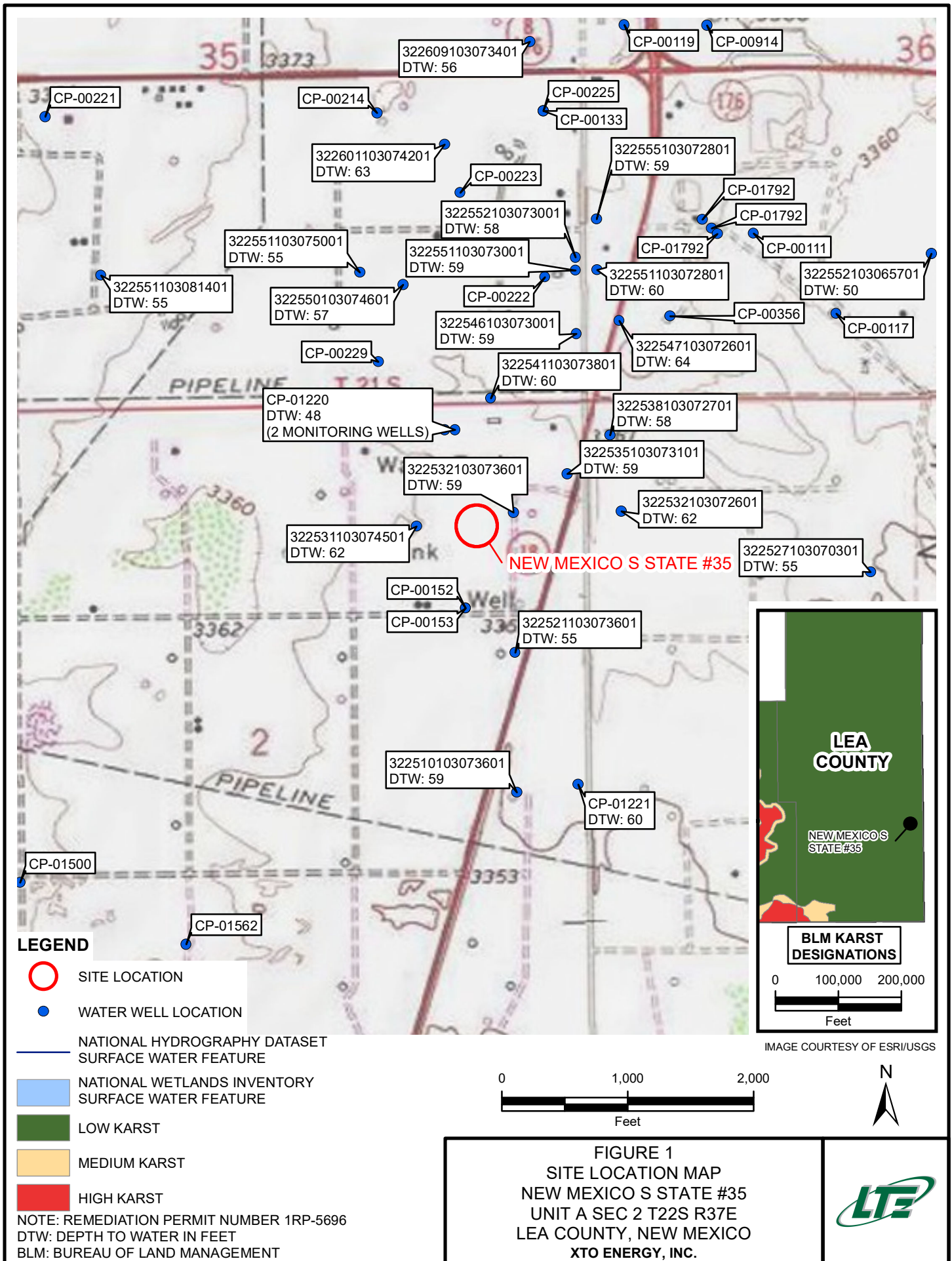
cc: Kyle Littrell, XTO
Ryan Mann, State Land Office

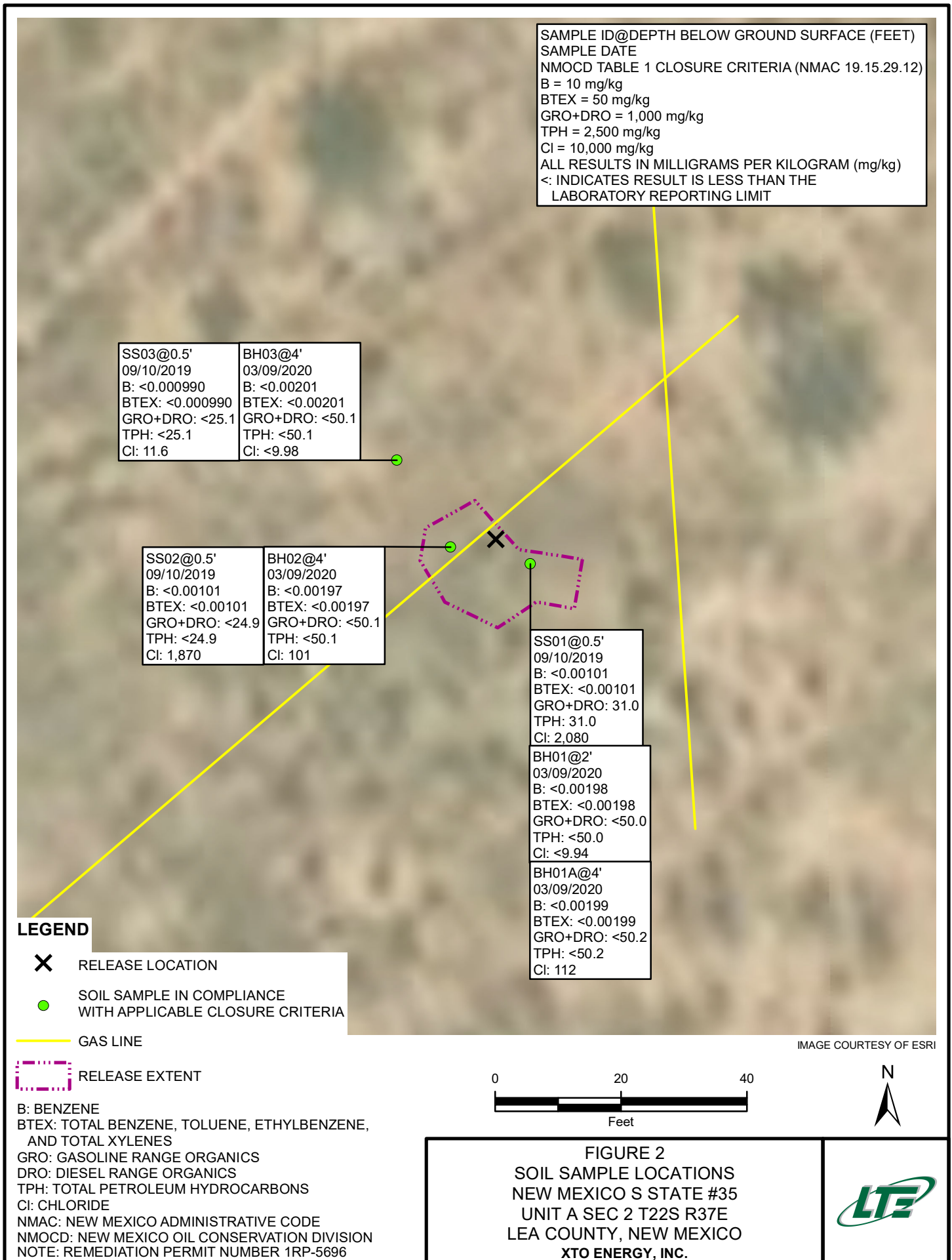
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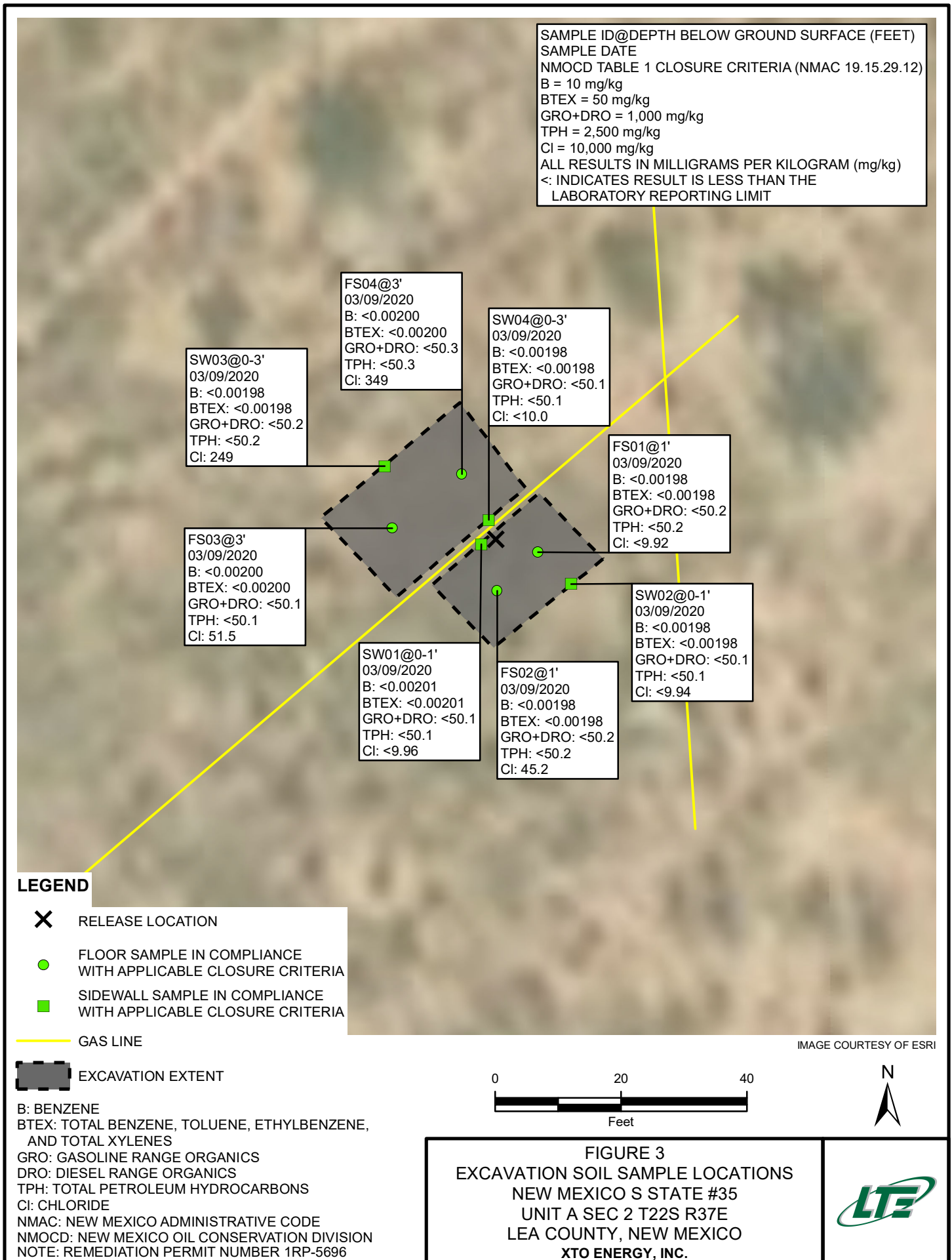
Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Photographic Logs
Attachment 2 Laboratory Analytical Report
Attachment 3 Lithologic/Soil Sampling Logs

FIGURES









TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

NEW MEXICO S STATE #35
REMEDIATION PERMIT NUMBER 1RP-5696
LEA 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	1,000	2,500	10,000
SS01	0.5	09/10/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<25.1	31.0	<25.1	31.0	31.0	2,080
SS02	0.5	09/10/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<24.9	<24.9	<24.9	<24.9	<24.9	1,870
SS03	0.5	09/10/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<25.1	<25.1	<25.1	<25.1	<25.1	11.6
BH01	2	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	<9.94
BH01A	4	03/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	112
BH02	4	03/09/2020	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<50.1	<50.1	<50.1	<50.1	<50.1	101
BH03	4	03/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<9.98
FS01	1	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	<9.92
FS02	1	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	45.2
FS03	3	03/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	51.5
FS04	3	03/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	349
SW01	0 - 1	03/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<9.96
SW02	0 - 1	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	<9.94
SW03	0 - 3	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	249
SW04	0 - 3	03/09/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	<10.0

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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



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ATTACHMENT 1: PHOTOGRAPHIC LOGS



PHOTOGRAPHIC LOG



Photograph 1: Southern view of spill extent.



Photograph 2: Northern view of surficial staining.



Photograph 3: View of southern excavation facing west.



Photograph 4: View of both excavations facing west.

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS



Analytical Report 636508

**for
LT Environmental, Inc.**

Project Manager: Dan Moir

New Mexico S State 35

012919207

16-SEP-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

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

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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

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

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

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



16-SEP-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **636508**

New Mexico S State 35

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) 636508. 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. 636508 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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

**Sample Cross Reference 636508****LT Environmental, Inc., Arvada, CO**

New Mexico S State 35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	09-10-19 16:27	0.5 ft	636508-001
SS02	S	09-10-19 16:28	0.5 ft	636508-002
SS03	S	09-10-19 16:28	0.5 ft	636508-003

**CASE NARRATIVE***Client Name: LT Environmental, Inc.**Project Name: New Mexico S State 35*

Project ID: 012919207
Work Order Number(s): 636508

Report Date: 16-SEP-19
Date Received: 09/11/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101247 Chloride by EPA 300

Lab Sample ID 636508-003 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 636508-001, -002, -003.

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

Batch: LBA-3101329 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 636508-001 S, 636508-001 SD.

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 636508-001 SD.

Batch: LBA-3101384 BTEX by EPA 8021B

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



Certificate of Analysis Summary 636508

LT Environmental, Inc., Arvada, CO

Project Name: New Mexico S State 35

Project Id: 012919207

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Wed Sep-11-19 08:50 am

Report Date: 16-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	636508-001	636508-002	636508-003			
	Field Id:	SS01	SS02	SS03			
	Depth:	0.5- ft	0.5- ft	0.5- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Sep-10-19 16:27	Sep-10-19 16:28	Sep-10-19 16:28			
BTEX by EPA 8021B	Extracted:	Sep-11-19 10:00	Sep-11-19 10:00	Sep-11-19 10:00			
	Analyzed:	Sep-11-19 15:05	Sep-11-19 15:25	Sep-11-19 15:44			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
Toluene		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
Ethylbenzene		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
m,p-Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
o-Xylene		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
Total Xylenes		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
Total BTEX		<0.00101 0.00101	<0.00101 0.00101	<0.000990 0.000990			
Chloride by EPA 300	Extracted:	Sep-11-19 10:09	Sep-11-19 10:09	Sep-11-19 10:09			
	Analyzed:	Sep-11-19 14:40	Sep-11-19 14:48	Sep-11-19 14:54			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		2080 D 100	1870 D 99.6	11.6 9.92			
TPH by SW8015 Mod	Extracted:	Sep-11-19 09:30	Sep-11-19 09:30	Sep-11-19 09:30			
	Analyzed:	Sep-11-19 13:20	Sep-11-19 14:22	Sep-11-19 14:42			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<25.1 25.1	<24.9 24.9	<25.1 25.1			
Diesel Range Organics (DRO)		31.0 25.1	<24.9 24.9	<25.1 25.1			
Motor Oil Range Hydrocarbons (MRO)		<25.1 25.1	<24.9 24.9	<25.1 25.1			
Total GRO-DRO		31.0 25.1	<24.9 24.9	<25.1 25.1			
Total TPH		31.0 25.1	<24.9 24.9	<25.1 25.1			

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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS01**
Lab Sample Id: 636508-001

Matrix: Soil
Date Collected: 09.10.19 16.27

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101247

Date Prep: 09.11.19 10.09

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2080	100	mg/kg	09.11.19 16.00	D	10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3101329

Date Prep: 09.11.19 09.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.11.19 13.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	31.0	25.1	mg/kg	09.11.19 13.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.11.19 13.20	U	1
Total GRO-DRO	PHC628	31.0	25.1	mg/kg	09.11.19 13.20		1
Total TPH	PHC635	31.0	25.1	mg/kg	09.11.19 13.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	09.11.19 13.20	
o-Terphenyl	84-15-1	107	%	70-135	09.11.19 13.20	



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS01**
Lab Sample Id: 636508-001

Matrix: Soil
Date Collected: 09.10.19 16.27

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 09.11.19 10.00

Basis: Wet Weight

Seq Number: 3101384

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.11.19 15.05	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.11.19 15.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	129	%	70-130	09.11.19 15.05		
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.11.19 15.05		



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS02**
Lab Sample Id: 636508-002

Matrix: Soil
Date Collected: 09.10.19 16.28

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101247

Date Prep: 09.11.19 10.09

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1870	99.6	mg/kg	09.11.19 16.06	D	10

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3101329

Date Prep: 09.11.19 09.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	09.11.19 14.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	09.11.19 14.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	09.11.19 14.22	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	09.11.19 14.22	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	09.11.19 14.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	09.11.19 14.22	
o-Terphenyl	84-15-1	101	%	70-135	09.11.19 14.22	



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS02**
Lab Sample Id: 636508-002

Matrix: Soil
Date Collected: 09.10.19 16.28

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 09.11.19 10.00

Basis: Wet Weight

Seq Number: 3101384

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
m,p-Xylenes	179601-23-1	<0.00202	0.00202	mg/kg	09.11.19 15.25	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
Total BTEX		<0.00101	0.00101	mg/kg	09.11.19 15.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.11.19 15.25		
4-Bromofluorobenzene	460-00-4	103	%	70-130	09.11.19 15.25		



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS03**
Lab Sample Id: 636508-003

Matrix: Soil
Date Collected: 09.10.19 16.28

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3101247

Date Prep: 09.11.19 10.09

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.6	9.92	mg/kg	09.11.19 14.54		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3101329

Date Prep: 09.11.19 09.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.1	25.1	mg/kg	09.11.19 14.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.1	25.1	mg/kg	09.11.19 14.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.1	25.1	mg/kg	09.11.19 14.42	U	1
Total GRO-DRO	PHC628	<25.1	25.1	mg/kg	09.11.19 14.42	U	1
Total TPH	PHC635	<25.1	25.1	mg/kg	09.11.19 14.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	09.11.19 14.42	
o-Terphenyl	84-15-1	103	%	70-135	09.11.19 14.42	



Certificate of Analytical Results 636508

LT Environmental, Inc., Arvada, CO

New Mexico S State 35

Sample Id: **SS03**
Lab Sample Id: 636508-003

Matrix: Soil
Date Collected: 09.10.19 16.28

Date Received: 09.11.19 08.50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 09.11.19 10.00

Basis: Wet Weight

Seq Number: 3101384

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	09.11.19 15.44	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
Total BTEX		<0.000990	0.000990	mg/kg	09.11.19 15.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.11.19 15.44		
4-Bromofluorobenzene	460-00-4	102	%	70-130	09.11.19 15.44		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
New Mexico S State 35

Analytical Method: Chloride by EPA 300

Seq Number: 3101247

MB Sample Id: 7685933-1-BLK

Matrix: Solid

LCS Sample Id: 7685933-1-BKS

Prep Method: E300P

Date Prep: 09.11.19

LCSD Sample Id: 7685933-1-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	256	102	255	102	90-110	0	20	mg/kg	09.11.19 09:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3101247

Parent Sample Id: 636504-001

Matrix: Soil

MS Sample Id: 636504-001 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636504-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19000	3990	22200	80	22200	80	90-110	0	20	mg/kg	09.11.19 13:07	X

Analytical Method: Chloride by EPA 300

Seq Number: 3101247

Parent Sample Id: 636508-003

Matrix: Solid

MS Sample Id: 636508-003 S

Prep Method: E300P

Date Prep: 09.11.19

MSD Sample Id: 636508-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.6	200	219	104	236	112	90-110	7	20	mg/kg	09.11.19 15:01	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101329

MB Sample Id: 7686136-1-BLK

Matrix: Solid

LCS Sample Id: 7686136-1-BKS

Prep Method: SW8015P

Date Prep: 09.11.19

LCSD Sample Id: 7686136-1-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)	<25.0	1000	916	92	918	92	70-135	0	35	mg/kg	09.11.19 12:39	
Diesel Range Organics (DRO)	<25.0	1000	851	85	852	85	70-135	0	35	mg/kg	09.11.19 12:39	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	116		124		120		70-135	%	09.11.19 12:39
o-Terphenyl	95		115		108		70-135	%	09.11.19 12:39

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

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

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

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



LT Environmental, Inc.

New Mexico S State 35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3101329

Parent Sample Id: 636508-001

Matrix: Soil

MS Sample Id: 636508-001 S

Prep Method: SW8015P

Date Prep: 09.11.19

MSD Sample Id: 636508-001 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)	<25.1	1010	979	97	1140	114	70-135	15	35	mg/kg	09.11.19 13:41	
Diesel Range Organics (DRO)	31.0	1010	936	90	1120	109	70-135	18	35	mg/kg	09.11.19 13:41	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	138	**	149	**	70-135	%	09.11.19 13:41
o-Terphenyl	128		152	**	70-135	%	09.11.19 13:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101384

MB Sample Id: 7686177-1-BLK

Matrix: Solid

LCS Sample Id: 7686177-1-BKS

Prep Method: SW5030B

Date Prep: 09.11.19

LCSD Sample Id: 7686177-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0871	87	0.0876	88	70-130	1	35	mg/kg	09.11.19 11:28	
Toluene	<0.00100	0.100	0.0887	89	0.0877	88	70-130	1	35	mg/kg	09.11.19 11:28	
Ethylbenzene	<0.00100	0.100	0.108	108	0.109	109	71-129	1	35	mg/kg	09.11.19 11:28	
m,p-Xylenes	<0.00200	0.200	0.225	113	0.225	113	70-135	0	35	mg/kg	09.11.19 11:28	
o-Xylene	<0.00100	0.100	0.112	112	0.114	114	71-133	2	35	mg/kg	09.11.19 11:28	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		104		99		70-130	%	09.11.19 11:28
4-Bromofluorobenzene	100		119		113		70-130	%	09.11.19 11:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101384

Parent Sample Id: 636506-002

Matrix: Soil

MS Sample Id: 636506-002 S

Prep Method: SW5030B

Date Prep: 09.11.19

MSD Sample Id: 636506-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.101	0.0866	86	0.0853	84	70-130	2	35	mg/kg	09.11.19 13:46	
Toluene	<0.00101	0.101	0.0828	82	0.0863	85	70-130	4	35	mg/kg	09.11.19 13:46	
Ethylbenzene	<0.00101	0.101	0.0987	98	0.0882	87	71-129	11	35	mg/kg	09.11.19 13:46	
m,p-Xylenes	<0.00101	0.202	0.202	100	0.180	90	70-135	12	35	mg/kg	09.11.19 13:46	
o-Xylene	<0.00101	0.101	0.104	103	0.0924	91	71-133	12	35	mg/kg	09.11.19 13:46	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		113		70-130	%	09.11.19 13:46
4-Bromofluorobenzene	124		125		70-130	%	09.11.19 13:46

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

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

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

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



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
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-1111
Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No: 1042503

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:			
City, State ZIP:		Midland, Tx 79705		City, State ZIP:			
Phone:		(432) 236-3849		Email:		wmather@ltenv.com, dmoir@ltenv.com	

Work Order Comments			
Program: UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>			
State of Project:			
Reporting Level: I <input type="checkbox"/> Level III <input type="checkbox"/> UST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>			
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: <input type="checkbox"/>			

Work Order Notes	
------------------	--

Project Name:	WYV/MS-100 State 30 General Canyon 1H		Turn Around	1 hr
Project Number:	42919048		Routine	<input checked="" type="checkbox"/>
P.O. Number:	Eddy County		Rush:	
Sampler's Name:	William Mather		Due Date:	


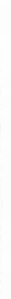




SAMPLE RECEIPT		Temp Blank:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Temperature (°C):	5.0 Thermometer ID							
Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No							
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		N/A		Correction Factor:			-0.2
Sample Custody Seals:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		N/A		Total Containers:			3

Number of Containers									
EPA 8015)									
(EPA 0=8021)									
Side (EPA 300.0)									
TAT starts the day received by the lab, if received by 4:30pm									
Comments									

[illegible]

Total	200.7 / 6010	200.8 / 6020:
Circle Method(s) and Metal(s) to be analyzed		
8RCRA	13PPM Texas 11	AI Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
TCLP / SPLP	6010: 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
		1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client, company to Xenco, no further order or agreement necessary. 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 service. Xenco will be liable only for the cost of samples submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

of Xerox. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted for analysis.					Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. 		9/11/19 08:50 ²			
2. 					
3. 					
4. 					
5. 					

Revised Date 05/14/18 Rev. 20



Client: LT Environmental, Inc.

Date/ Time Received: 09/11/2019 08:50:00 AM

Work Order #: 636508

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	5.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 09/11/2019

Checklist reviewed by:

Jessica Kramer

Date: 09/12/2019

Analytical Report 655087

**for
LT Environmental, Inc.**

Project Manager: Dan Moir

New Mexico S State #35

012919207

11-MAR-20

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

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

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



11-MAR-20

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **655087**

New Mexico S State #35

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) 655087. 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. 655087 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Manager

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

Certified and approved by numerous States and Agencies.

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

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

**Sample Cross Reference 655087****LT Environmental, Inc., Arvada, CO**

New Mexico S State #35

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	03-09-20 13:14	2 ft	655087-001
BH01A	S	03-09-20 13:17	4 ft	655087-002
BH02	S	03-09-20 13:44	4 ft	655087-003
BH03	S	03-09-20 14:09	4 ft	655087-004
FS01	S	03-09-20 14:16	1 ft	655087-005
FS02	S	03-09-20 14:17	1 ft	655087-006
FS03	S	03-09-20 14:48	3 ft	655087-007
FS04	S	03-09-20 14:50	3 ft	655087-008
SW01	S	03-09-20 14:32	0 - 1 ft	655087-009
SW02	S	03-09-20 14:35	0 - 1 ft	655087-010
SW03	S	03-09-20 14:53	0 - 3 ft	655087-011
SW04	S	03-09-20 14:55	0 - 3 ft	655087-012



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *New Mexico S State #35*

Project ID: 012919207
Work Order Number(s): 655087

Report Date: 11-MAR-20
Date Received: 03/10/2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3119165 BTEX by EPA 8021B

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



Certificate of Analysis Summary 655087

LT Environmental, Inc., Arvada, CO

Project Name: New Mexico S State #35

Project Id: 012919207

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Mar-10-20 08:45 am

Report Date: 11-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	655087-001	655087-002	655087-003	655087-004	655087-005	655087-006
	<i>Field Id:</i>	BH01	BH01A	BH02	BH03	FS01	FS02
	<i>Depth:</i>	2- ft	4- ft	4- ft	4- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-09-20 13:14	Mar-09-20 13:17	Mar-09-20 13:44	Mar-09-20 14:09	Mar-09-20 14:16	Mar-09-20 14:17
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30
	<i>Analyzed:</i>	Mar-10-20 13:39	Mar-10-20 14:00	Mar-10-20 14:20	Mar-10-20 14:40	Mar-10-20 15:01	Mar-10-20 15:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
Toluene		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		<0.00395 0.00395	<0.00398 0.00398	<0.00394 0.00394	<0.00402 0.00402	<0.00396 0.00396	<0.00396 0.00396
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		<0.00198 0.00198	<0.00199 0.00199	<0.00197 0.00197	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22
	<i>Analyzed:</i>	Mar-10-20 11:46	Mar-10-20 12:03	Mar-10-20 12:09	Mar-10-20 12:14	Mar-10-20 12:20	Mar-10-20 12:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<9.94 9.94	112 9.98	101 9.96	<9.98 9.98	<9.92 9.92	45.2 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30
	<i>Analyzed:</i>	Mar-10-20 15:50	Mar-10-20 16:52	Mar-10-20 17:12	Mar-10-20 17:42	Mar-10-20 18:02	Mar-10-20 18:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.2 50.2
Diesel Range Organics (DRO)		<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.2 50.2
Total GRO-DRO		<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.2 50.2
Total TPH		<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2	<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

Jessica Kramer
Project Manager



Certificate of Analysis Summary 655087

LT Environmental, Inc., Arvada, CO

Project Name: New Mexico S State #35

Project Id: 012919207

Contact: Dan Moir

Project Location:

Date Received in Lab: Tue Mar-10-20 08:45 am

Report Date: 11-MAR-20

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	655087-007	655087-008	655087-009	655087-010	655087-011	655087-012
	<i>Field Id:</i>	FS03	FS04	SW01	SW02	SW03	SW04
	<i>Depth:</i>	3- ft	3- ft	0-1 ft	0-1 ft	0-3 ft	0-3 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Mar-09-20 14:48	Mar-09-20 14:50	Mar-09-20 14:32	Mar-09-20 14:35	Mar-09-20 14:53	Mar-09-20 14:55
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30	Mar-10-20 10:30
	<i>Analyzed:</i>	Mar-10-20 15:42	Mar-10-20 16:02	Mar-10-20 16:22	Mar-10-20 16:43	Mar-10-20 17:44	Mar-10-20 18:04
	<i>Units/RL:</i>	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	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402	<0.00396 0.00396	<0.00395 0.00395	<0.00397 0.00397
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22	Mar-10-20 11:22
	<i>Analyzed:</i>	Mar-10-20 12:42	Mar-10-20 12:48	Mar-10-20 12:53	Mar-10-20 12:59	Mar-10-20 13:05	Mar-10-20 13:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		51.5 10.0	349 9.92	<9.96 9.96	<9.94 9.94	249 9.96	<10.0 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30	Mar-10-20 13:30
	<i>Analyzed:</i>	Mar-10-20 18:43	Mar-10-20 19:04	Mar-10-20 19:24	Mar-10-20 19:44	Mar-10-20 20:25	Mar-10-20 20:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.3 50.3	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Diesel Range Organics (DRO)		<50.1 50.1	<50.3 50.3	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.3 50.3	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Total GRO-DRO		<50.1 50.1	<50.3 50.3	<50.1 50.1	<50.1 50.1	<50.2 50.2	<50.1 50.1
Total TPH		<50.1 50.1	<50.3 50.3	<50.1 50.1	<50.1 50.1	<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 Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH01**
Lab Sample Id: 655087-001

Matrix: Soil
Date Collected: 03.09.20 13.14

Date Received: 03.10.20 08.45
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	03.10.20 11.46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.10.20 15.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.10.20 15.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.10.20 15.50	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.10.20 15.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.10.20 15.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.10.20 15.50	
o-Terphenyl	84-15-1	92	%	70-135	03.10.20 15.50	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH01**
Lab Sample Id: 655087-001

Matrix: Soil
Date Collected: 03.09.20 13.14

Date Received: 03.10.20 08.45
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	03.10.20 13.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 13.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 13.39		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 13.39		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH01A**
Lab Sample Id: 655087-002

Matrix: Soil
Date Collected: 03.09.20 13.17

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	112	9.98	mg/kg	03.10.20 12.03		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.20 16.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.10.20 16.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.20 16.52	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.10.20 16.52	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.10.20 16.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.10.20 16.52	
o-Terphenyl	84-15-1	93	%	70-135	03.10.20 16.52	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH01A**
Lab Sample Id: 655087-002

Matrix: Soil
Date Collected: 03.09.20 13.17

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.20 14.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.20 14.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	03.10.20 14.00		
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.10.20 14.00		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH02**
Lab Sample Id: 655087-003

Matrix: Soil
Date Collected: 03.09.20 13.44

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	9.96	mg/kg	03.10.20 12.09		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 17.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 17.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 17.12	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 17.12	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 17.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.10.20 17.12	
o-Terphenyl	84-15-1	97	%	70-135	03.10.20 17.12	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH02**
Lab Sample Id: 655087-003

Matrix: Soil
Date Collected: 03.09.20 13.44

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	03.10.20 14.20	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
Total BTEX		<0.00197	0.00197	mg/kg	03.10.20 14.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.10.20 14.20		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 14.20		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH03**
Lab Sample Id: 655087-004

Matrix: Soil
Date Collected: 03.09.20 14.09

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	03.10.20 12.14	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 17.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 17.42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 17.42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.10.20 17.42	
o-Terphenyl	84-15-1	92	%	70-135	03.10.20 17.42	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **BH03**
Lab Sample Id: 655087-004

Matrix: Soil
Date Collected: 03.09.20 14.09

Date Received: 03.10.20 08.45
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.20 14.40	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.20 14.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 14.40		
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.10.20 14.40		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS01**
Lab Sample Id: 655087-005

Matrix: Soil
Date Collected: 03.09.20 14.16

Date Received: 03.10.20 08.45
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	03.10.20 12.20	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.20 18.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.10.20 18.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.20 18.02	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.10.20 18.02	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.10.20 18.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.10.20 18.02	
o-Terphenyl	84-15-1	93	%	70-135	03.10.20 18.02	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS01**
Lab Sample Id: 655087-005

Matrix: Soil
Date Collected: 03.09.20 14.16

Date Received: 03.10.20 08.45
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.10.20 15.01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 15.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 15.01		
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.10.20 15.01		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS02**
Lab Sample Id: 655087-006

Matrix: Soil
Date Collected: 03.09.20 14.17

Date Received: 03.10.20 08.45
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	45.2	10.0	mg/kg	03.10.20 12.37		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.20 18.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.10.20 18.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.20 18.23	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.10.20 18.23	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.10.20 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.10.20 18.23	
o-Terphenyl	84-15-1	94	%	70-135	03.10.20 18.23	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS02**
Lab Sample Id: 655087-006

Matrix: Soil
Date Collected: 03.09.20 14.17

Date Received: 03.10.20 08.45
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.10.20 15.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 15.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 15.21		
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.10.20 15.21		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS03**
Lab Sample Id: 655087-007

Matrix: Soil
Date Collected: 03.09.20 14.48

Date Received: 03.10.20 08.45
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	51.5	10.0	mg/kg	03.10.20 12.42		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 18.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 18.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 18.43	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 18.43	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.10.20 18.43	
o-Terphenyl	84-15-1	104	%	70-135	03.10.20 18.43	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS03**
Lab Sample Id: 655087-007

Matrix: Soil
Date Collected: 03.09.20 14.48

Date Received: 03.10.20 08.45
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119165

Date Prep: 03.10.20 10.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.10.20 15.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.20 15.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.10.20 15.42		
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.10.20 15.42		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS04**
Lab Sample Id: 655087-008

Matrix: Soil
Date Collected: 03.09.20 14.50

Date Received: 03.10.20 08.45
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	349	9.92	mg/kg	03.10.20 12.48		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.10.20 19.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.10.20 19.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.10.20 19.04	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.10.20 19.04	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.10.20 19.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.10.20 19.04	
o-Terphenyl	84-15-1	100	%	70-135	03.10.20 19.04	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **FS04**
Lab Sample Id: 655087-008

Matrix: Soil
Date Collected: 03.09.20 14.50

Date Received: 03.10.20 08.45
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.20 16.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.20 16.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.10.20 16.02		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 16.02		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW01**
Lab Sample Id: 655087-009

Matrix: Soil
Date Collected: 03.09.20 14.32

Date Received: 03.10.20 08.45
Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	03.10.20 12.53	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 19.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 19.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 19.24	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 19.24	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 19.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.10.20 19.24	
o-Terphenyl	84-15-1	93	%	70-135	03.10.20 19.24	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW01**

Matrix: Soil

Date Received: 03.10.20 08.45

Lab Sample Id: 655087-009

Date Collected: 03.09.20 14.32

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.20 16.22	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.20 16.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.10.20 16.22		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 16.22		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW02**

Matrix: Soil

Date Received: 03.10.20 08.45

Lab Sample Id: 655087-010

Date Collected: 03.09.20 14.35

Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 11.22

Basis: Wet Weight

Seq Number: 3119170

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	03.10.20 12.59	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 03.10.20 13.30

Basis: Wet Weight

Seq Number: 3119178

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 19.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 19.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 19.44	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 19.44	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 19.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.10.20 19.44	
o-Terphenyl	84-15-1	97	%	70-135	03.10.20 19.44	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW02**
Lab Sample Id: 655087-010

Matrix: Soil
Date Collected: 03.09.20 14.35

Date Received: 03.10.20 08.45
Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3119165

Date Prep: 03.10.20 10.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.10.20 16.43	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 16.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 16.43		
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 16.43		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW03**
Lab Sample Id: 655087-011

Matrix: Soil
Date Collected: 03.09.20 14.53

Date Received: 03.10.20 08.45
Sample Depth: 0 - 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	249	9.96	mg/kg	03.10.20 13.05		1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.10.20 20.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.10.20 20.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.10.20 20.25	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.10.20 20.25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.10.20 20.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.10.20 20.25	
o-Terphenyl	84-15-1	97	%	70-135	03.10.20 20.25	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW03**
Lab Sample Id: 655087-011

Matrix: Soil
Date Collected: 03.09.20 14.53

Date Received: 03.10.20 08.45
Sample Depth: 0 - 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	03.10.20 17.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 17.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.10.20 17.44		
4-Bromofluorobenzene	460-00-4	97	%	70-130	03.10.20 17.44		



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW04**
Lab Sample Id: 655087-012

Matrix: Soil
Date Collected: 03.09.20 14.55

Date Received: 03.10.20 08.45
Sample Depth: 0 - 3 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3119170

Date Prep: 03.10.20 11.22

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	03.10.20 13.21	U	1

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3119178

Date Prep: 03.10.20 13.30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.10.20 20.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.10.20 20.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.10.20 20.45	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.10.20 20.45	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.10.20 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.10.20 20.45	
o-Terphenyl	84-15-1	102	%	70-135	03.10.20 20.45	



Certificate of Analytical Results 655087

LT Environmental, Inc., Arvada, CO

New Mexico S State #35

Sample Id: **SW04**
Lab Sample Id: 655087-012

Matrix: Soil
Date Collected: 03.09.20 14.55

Date Received: 03.10.20 08.45
Sample Depth: 0 - 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 03.10.20 10.30

Basis: Wet Weight

Seq Number: 3119165

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	03.10.20 18.04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.10.20 18.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.10.20 18.04		
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.10.20 18.04		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **SQL** 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



LT Environmental, Inc.
New Mexico S State #35

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

MB Sample Id: 7698479-1-BLK

Matrix: Solid

LCS Sample Id: 7698479-1-BKS

Prep Method: E300P

Date Prep: 03.10.20

LCSD Sample Id: 7698479-1-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	259	104	259	104	90-110	0	20	mg/kg	03.10.20 11:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: E300P

Date Prep: 03.10.20

MSD Sample Id: 655087-001 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	212	106	210	105	90-110	1	20	mg/kg	03.10.20 11:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3119170

Parent Sample Id: 655087-011

Matrix: Soil

MS Sample Id: 655087-011 S

Prep Method: E300P

Date Prep: 03.10.20

MSD Sample Id: 655087-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	249	200	463	107	460	106	90-110	1	20	mg/kg	03.10.20 13:10	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

MB Sample Id: 7698526-1-BLK

Matrix: Solid

LCS Sample Id: 7698526-1-BKS

Prep Method: SW8015P

Date Prep: 03.10.20

LCSD Sample Id: 7698526-1-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	895	90	949	95	70-135	6	35	mg/kg	03.10.20 15:03	
Diesel Range Organics (DRO)	<50.0	1000	881	88	875	88	70-135	1	35	mg/kg	03.10.20 15:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		104		101		70-135	%	03.10.20 15:03
o-Terphenyl	105		110		101		70-135	%	03.10.20 15:03

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

Matrix: Solid

MB Sample Id: 7698526-1-BLK

Prep Method: SW8015P

Date Prep: 03.10.20

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.10.20 14:43	

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * |(C-E) / (C+E)|$
 $[D] = 100 * (C) / [B]$
 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



LT Environmental, Inc.

New Mexico S State #35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3119178

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: SW8015P

Date Prep: 03.10.20

MSD Sample Id: 655087-001 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	888	89	894	89	70-135	1	35	mg/kg	03.10.20 16:11	
Diesel Range Organics (DRO)	<50.2	1000	958	96	993	99	70-135	4	35	mg/kg	03.10.20 16:11	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		108		70-135	%	03.10.20 16:11
o-Terphenyl	99		106		70-135	%	03.10.20 16:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119165

MB Sample Id: 7698474-1-BLK

Matrix: Solid

LCS Sample Id: 7698474-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.20

LCSD Sample Id: 7698474-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.111	111	70-130	1	35	mg/kg	03.10.20 11:57	
Toluene	<0.00200	0.100	0.106	106	0.108	108	70-130	2	35	mg/kg	03.10.20 11:57	
Ethylbenzene	<0.00200	0.100	0.101	101	0.103	103	71-129	2	35	mg/kg	03.10.20 11:57	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.213	107	70-135	2	35	mg/kg	03.10.20 11:57	
o-Xylene	<0.00200	0.100	0.104	104	0.106	106	71-133	2	35	mg/kg	03.10.20 11:57	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		108		108		70-130	%	03.10.20 11:57
4-Bromofluorobenzene	98		94		92		70-130	%	03.10.20 11:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3119165

Parent Sample Id: 655087-001

Matrix: Soil

MS Sample Id: 655087-001 S

Prep Method: SW5030B

Date Prep: 03.10.20

MSD Sample Id: 655087-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.113	114	0.115	116	70-130	2	35	mg/kg	03.10.20 12:38	
Toluene	<0.00198	0.0992	0.110	111	0.112	113	70-130	2	35	mg/kg	03.10.20 12:38	
Ethylbenzene	<0.00198	0.0992	0.106	107	0.107	108	71-129	1	35	mg/kg	03.10.20 12:38	
m,p-Xylenes	<0.00397	0.198	0.219	111	0.220	111	70-135	0	35	mg/kg	03.10.20 12:38	
o-Xylene	<0.00198	0.0992	0.108	109	0.109	110	71-133	1	35	mg/kg	03.10.20 12:38	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	03.10.20 12:38
4-Bromofluorobenzene	95		92		70-130	%	03.10.20 12:38

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

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

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

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



Chain of Custody

Work Order No: 1055087

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 508-3334
 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) 889-6701
 Atlanta, GA (770) 449-8800

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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@lienx.com, dmoir@lienx.com

Program: <input type="checkbox"/> UST/PS <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRP <input type="checkbox"/> Superfund State of Project:	
Reporting Level: <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3	Deliverables: <input type="checkbox"/> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name:	New Mexico State #35	Turn Around	
Project Number:	012919207	Routine: <input type="checkbox"/>	
PO #:	IRP-5696	Rush: 24 hrs	
Sample's Name:	Fatima Smith	Due Date:	
SAMPLE RECEIPT	Temp Blank: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wet Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Temperature (°C):	1.2	Thermometer ID	
Received Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Correction Factor:	-0.2
Cooler Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Total Containers:	12
Sample Custody Seals:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
BH01	S	3/9/20	1314	2'	1	X	X	X		
BH01A			1317	4'		X	X	X		
BH02			1344	4'		X	X	X		
BH03			1409	4'		X	X	X		
FS01			1416	1'		X	X	X		
FS02			1417	1'		X	X	X		
FS03			1448	3'		X	X	X		
FS04			1450	3'		X	X	X		
SW01			1432	0-1'		X	X	X		
SW02			1435	0-1'		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 Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 fat	3/10/20 08:30	2	3/10/20 08:45		
3		4			
5		6			



Chain of Custody

Work Order No:

655087

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 (904) 759-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Little
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: <input type="checkbox"/> PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRT <input type="checkbox"/> Superfund	
State of Project:	
Reporting Level: <input type="checkbox"/> Level <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	New Mexico State #35	Turn Around	
Project Number:	012919207	Routine:	<input type="checkbox"/>
PO #:	IRP-5696	Rush: 24 hrs	
Sampler's Name:	Fatima Smith	Due Date:	
SAMPLE RECEIPT			
Temperature (°C):	Temp Blank:	Yes	No
Received Intact:	Yes	No	
Cooler Custody Seats:	Yes	No	
Sample Custody Seals:	Yes	No	
	N/A	Correction Factor:	
	Yes	Total Containers:	
	No		
	N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
SW03	S	3/4/20	1453	0-3'	1	X	X	X		
SW04	S	3/4/20	1455	0-3'	1	X	X	X		
<div style="text-align: center;"> </div>										
TAT starts the day received 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 Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		3/10/20 08:30			3/10/20 08:45

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.10.2020 08.45.00 AM

Work Order #: 655087

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
#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: 03.10.2020

Checklist reviewed by:





Jessica Kramer


Date: 03.10.2020

ATTACHMENT 3: LITHOLOGIC / SOIL SAMPLING LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:				
		BH01		3/9/2020				
		Site Name: New Mexico S State #35						
		RP or Incident Number:						
LTE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: FS				
		Chloride, PID		Method: Hand auger				
Hole Diameter:								
Total Depth: 4'								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	<173	0.7	N	BH01	2'	2	SP	Open Excavation
D	207	1.0	N	BH01A	4'	4		silty SAND, dry, reddish brown, fine-very fine, no stain, no odor color change to tan Total depth 4 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:				
		BH02		3/9/2020				
		Site Name: New Mexico S State #35						
		RP or Incident Number:						
LTE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: FS				
		Chloride, PID		Method: Hand auger				
Hole Diameter:								
Total Depth: 4'								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
D	593	0.5	N		2'	2	SP	Open Excavation
D	<173	0.4	N	BH02	4'	4		silty SAND, dry, reddish brown, fine-very fine, no stain, no odor color change to tan Total depth 4 feet bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:				
		BH03		3/9/2020				
		Site Name: New Mexico S State #35						
		RP or Incident Number:						
LTE Job Number:								
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long:		Field Screening:		Logged By: FS				
		Chloride, PID		Method: Hand auger				
Hole Diameter:								
Total Depth: 4'								
Comments:								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	<173	0.1	N	BH03	4'	0	SP	
						4		Open Excavation
						silty SAND, dry, tan, poorly graded, fine-very fine, no stain, no odor		
Total depth 4 feet bgs								