

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	NRM2010853797
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

Cause of Release

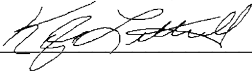
State of New Mexico
Oil Conservation Division

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

Initial Response

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

☐ The source of the release has been stopped. ☐ The impacted area has been secured to protect human health and the environment. ☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☐ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
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: _____	Title: _____
Signature:  _____	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u> Received by: <u>Ramona Marcus</u> Date: <u>4/17/2020</u>	

NRM2010853797

Location:	Hackberry 34 CTB	
Spill Date:	4/2/2020	
Area 1		
Approximate Area =	491.50	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Crude Oil =	18.41	bbls
Total Produced Water =	23.43	bbls
Area 2		
Approximate Area =	198.00	sq. ft.
Average Saturation (or depth) of spill =	5.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Crude Oil =	0.19	bbls
Total Produced Water =	0.25	bbls
Area 3		
Approximate Area =	13.00	sq. ft.
Average Saturation (or depth) of spill =	24.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Crude Oil =	0.06	bbls
Total Produced Water =	0.08	bbls
Area 4		
Approximate Area =	1718.00	sq. ft.
Average Saturation (or depth) of spill =	4.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Crude Oil =	1.35	bbls
Total Produced Water =	1.71	bbls
Area 5		
Approximate Area =	1007.00	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =		
0.03		
VOLUME OF LEAK		
Total Crude Oil =	0.39	bbls
Total Produced Water =	0.50	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	20.40	bbls
Total Produced Water =	25.97	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	18.22	bbls
Total Produced Water =	23.18	bbls

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	NRM2010853797
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature: _____ Date: _____
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2010853797
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Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature: _____ Date: _____
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____



LT Environmental, Inc.

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

September 28, 2020

District 2
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Deferral Request
 Hackberry 34 CTB
 Incident Number NRM2010853797
 Eddy County, New Mexico**

To Whom it May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment, soil sampling, and remediation activities at the Hackberry 34 CTB (Site) in Unit A, Section 34, Township 19 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and remediation activities was to address impacts to soil resulting from a release of crude oil and produced water at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation for Incident Number NRM2010853797 until the Site is reconstructed, and/or the well pad is abandoned.

RELEASE BACKGROUND

On April 2, 2020, it was discovered that a valve upstream of the header had malfunctioned, resulting in the release of approximately 20.4 barrels (bbls) of crude oil and 25.97 bbls of produced water onto the surface of the production pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 18.2 bbls of crude oil and approximately 23.2 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on April 2, 2020 and submitted a Form C-141 on April 16, 2020 that was subsequently assigned Incident Number NRM2010853797.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data and regional depth to water determination. The closest permitted groundwater well with depth to groundwater data is



United States Geologic Survey (USGS) well 323803103510001, located approximately 0.81 miles north of the Site. The water well has a reported depth to groundwater from 1971 of 142 feet bgs. Within a 2.4 mile radius from the Site, there are six additional water wells that indicate regional depth to groundwater is greater than 100 feet bgs. New Mexico Office of the State Engineer (NMOSE) well C-00722 POD 3 was most recently drilled in May 2011. NMOSE well C-00722 POD 3 is located 1.38 miles west of the Site and has a reported depth to water of 140 feet bgs. All water wells used for depth to groundwater determination are depicted on Figure 1 and are referenced in Attachment 1. Additionally, data from USGS well 323803103510001 was utilized for the depth to groundwater determination for Incident Number NMAP1829837341 (Hackberry 34 Battery) and Incident Number NRM2007860939 (Hackberry 34 CTB), which were located within a 70-foot radius of the subject release. Incident Number NMAP1829837341 and Incident Number NRM2007860939 were approved by the NMOCD on April 2, 2019 and July 1, 2020, respectively.

The closest continuously flowing water or significant watercourse to the Site is an intermittent streambed, located approximately 2.46 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 underlain by unstable geology (low potential karst designation area). 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; and
- Chloride: 20,000 mg/kg

SITE ASSESSMENT AND SOIL SAMPLING ACTIVITIES

On April 21, 2020, LTE personnel conducted site assessment activities to evaluate the subject release extent. Additionally, LTE reviewed and verified the Form C-141 incident descriptions (release source and release location) with visual soil impacts present onsite; it was confirmed that the subject release was contained to the production pad within a crowded pipeline corridor containing twelve 3-inch steel surface oil and gas flowlines, one subsurface 6-inch steel oil and



gas pipeline, one surface 8-inch steel oil and gas pipeline, and two surface 4-inch poly water flowlines. LTE personnel collected five preliminary soil samples (SS01 through SS05) from approximately 0.5 feet bgs within the release extent. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS), and are presented on Figure 2.

The soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler initials, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

Laboratory analytical results indicated that BTEX, TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria in soil samples SS01 through SS05; soil sample SS03 also exceeded the Closure Criteria for benzene. Chloride concentrations were compliant with the Closure Criteria in all five preliminary soil samples. Based on field screening activities and laboratory analytical results, excavation was warranted to address the hydrocarbon impacted soil. Photographic documentation was conducted during the Site visit and is included in Attachment 2.

DELINEATION SOIL SAMPLING ACTIVITIES

On June 4, 2020, LTE personnel was at the Site to conduct initial delineation activities. Three boreholes (BH01 through BH03) were advanced utilizing a hand auger to a depth of 4.5 feet bgs to determine the vertical extent of impacted soil. Soil from the boreholes was field screened at 1-foot intervals for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips. Two delineation soil samples were collected from each borehole based on field screening results. One sample was collected from the soil interval with the highest field screening result (0.2 feet bgs to 0.5 foot bgs) and one soil sample was collected from the soil interval with field screening results indicating a clean vertical depth (2 feet bgs to 2.5 feet bgs). Field screening at depths of 2.5 feet to 4.5 feet bgs indicated a continued decrease in field screening results for volatile aromatic hydrocarbons. Chloride field screening results ranged from 1,216 mg/kg at 0.2 feet bgs to below detection limit at depths below 2.5 feet bgs. The soil samples were collected, handled as previously described, and analyzed for BTEX and TPH. Field screening results and observations for each borehole were recorded on lithologic/soil sampling logs and are presented in Attachment 3. Delineation soil sample locations are presented on Figure 3.

Laboratory analytical results indicated that TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria in soil samples BH01 through BH03 at a depth of 0.2 feet bgs to 0.5



foot bgs. Excluding soil sample BH03, laboratory analytical results also indicated that BTEX concentrations exceeded the Closure Criteria in soil samples BH01 and BH02 at depth of 0.2 feet bgs to 0.5 foot bgs. Due to chloride concentrations below the Closure Criteria in the preliminary soil sample analytical results and field screening results for the delineation soil samples, chloride analysis was not requested. Chloride analysis would be requested for final confirmation soil samples and/or additional delineation soil samples needed to confirm vertical or lateral delineation.

EXCAVATION AND SOIL SAMPLING ACTIVITIES

On July 9, 2020 and July 13, 2020, LTE personnel was onsite to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary and delineation soil samples. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips. Heavy equipment was utilized to remove impacted soil to within 2 feet around active production pipelines and/or aboveground flowlines to depths determined by laboratory analytical results of the delineation soil samples and field screening activities.

As outlined in the signed XTO Foreign Line Crossing Guidelines (Attachment 4), provided by the XTO field one call and pipeline group superintendent (field superintendent), the impacted area associated with the subject pipeline area was only to be hand dug at the sole discretion of the field superintendent. Upon review of the Site conditions, it was determined that due to the compacted placement and quantity of aboveground surface lines present, excavation by manual means via hand shoveling was infeasible. The distance between each 3-inch steel surface oil and gas flowlines was limited and could not be easily accessed with a hand shovel. Additionally, the underlying sandy soil is currently acting as a support for the active pipelines. Any attempt at ex-situ remedial efforts, such as nonmechanical or manual removal of that underlying soil would compromise pipeline stability and the safety of personnel if for any reason, controls for soil engineering support became debilitated due to factors affecting shear strength potential of the sandy strata. Pipeline weight on limited soil intended to act as a support could result in consequences affecting the safety of personnel or active operations. Based on the quantity and contents of active pipelines in the release area, XTO implemented additional safety precautions above the attached guidelines including restrictions on hand shoveling and cribbing. These restrictions were implemented as health and safety precautions at the judgement and responsibility of the field superintendent. Excavation was restricted to the impacted areas adjacent to the pipelines.

Following removal of impacted soil to the extent possible, LTE personnel collected 5-point composite soil samples from the excavation. Sidewall samples SW01 through SW03 were collected from the western sidewall of the excavation and floor samples FS01 through FS11 were collected from the floor of the excavation. Each composite soil sample represented at most a 200 square foot area and was collected by placing five equivalent aliquots of soil into a 1-gallon,



resealable plastic bag and homogenizing the soil samples by thoroughly mixing. Floor soil samples were collected at a depth of 2 feet bgs and sidewall soil samples were collected at depths ranging from ground surface to 2 feet bgs.

Impacted soil was left in place on the eastern excavation sidewall due to active subsurface and surface pipelines. To determine the volume of impacted soil to be bioremediated and/or left in place, LTE collected six discrete soil samples (SW04 through SW09) from the eastern excavation sidewall from depths ranging from 0.5 feet to 2 feet bgs. The excavation soil samples were handled as previously described and analyzed for BTEX, TPH, and chloride. The excavation extent and soil sample locations were mapped utilizing a handheld Global Positioning System (GPS), and are presented on Figure 4.

The excavation extents totaled approximately 2,022 square feet. A total of approximately 190 cubic yards of impacted soil were removed during excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico under XTO approved manifests. Following completion of confirmation soil sampling, the excavations were secured with a perimeter berm and fencing.

Hydrocarbon impacted soil left in-place around aboveground flowlines and/or subsurface utilities was treated with an NMOCD approved bioremedial agent. A 3 percent (%) solution of Micro-Blaze™ amendment and freshwater was applied using a backpack sprayer to enhance bioremediation of hydrocarbons in the areas with impacted soil overlying active production pipelines and/or aboveground flowlines.

FINAL DELINEATION AND SOIL SAMPLING ACTIVITIES

On July 17, 2020, in coordination with excavation activities, LTE conducted additional assessment activities to delineate the lateral and vertical extent of impacted soil left in-place that could not be accessed with heavy equipment for excavation. Impacted soil was left in-place along the eastern side of the excavation beneath twelve 3-inch steel surface flowlines and within one 8-inch steel oil and gas pipeline. Nine boreholes (BH04 through BH12) were advanced utilizing a hand auger to a depth of approximately 2.5 feet bgs within and around the release extent. Soil from the boreholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips. Two soil samples were collected from each borehole based on field screening results. One sample was collected from the soil interval with the highest field screening result (0.2 feet bgs to 0.5 foot bgs) and one soil sample was collected from the soil interval with field screening results indicating a clean vertical depth (2 feet bgs to 2.5 feet bgs). Soil samples were collected, handled, and analyzed as previously described. Field screening results and observations for each borehole were recorded on lithologic/soil sampling logs and are presented in Attachment 3. The additional delineation soil sample locations are presented on Figure 3.



ANALYTICAL RESULTS

Laboratory analytical results indicated that BTEX, TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria in preliminary soil samples SS01 through SS05. Based on the laboratory analytical results, impacted soil was excavated to the extent possible.

Laboratory analytical results indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in excavation floor soil samples FS01 through FS11 and excavation sidewall soil samples SW01, SW02, SW06, and SW07. Laboratory analytical results indicated that TPH-GRO/TPH-DRO and TPH concentrations exceeded the Closure Criteria in excavation sidewall soil samples SW03, SW04, SW05, SW08, and SW09. Sidewall soil sample SW09 also exceeded the Closure Criteria for BTEX. Further excavation of impacted soil beyond excavation sidewall samples SW03, SW04, SW05, SW08, and SW09 was limited by the presence of active subsurface and surface pipelines. XTO safety policy restricts soil disturbing activities to a 2-foot radius of any active pipelines.

Boreholes BH01 through BH12 were advanced within and around the release extent to delineate the lateral and vertical extent of impacted soil. Laboratory analytical results for the delineation soil samples collected from boreholes BH05 through BH12 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the delineation soil samples collected at 0.2 feet to 0.5 feet bgs from boreholes BH01 through BH04 indicated that BTEX and/or TPH-GRO/TPH-DRO, and TPH concentrations exceeded the Closure Criteria; subsequent delineation samples collected at 2 feet to 2.5 feet bgs were compliant. Based on the laboratory analytical results for the delineation soil samples, the remaining impacted soil was successfully defined and delineated, and impacted soil did not extend deeper than 2.5 feet bgs. The approximate area of residual impacts below the pipelines is presented on Figure 5.

Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included in Attachment 5.

DEFERRAL REQUEST

A total of approximately 190 cubic yards of impacted soil were excavated from the Site; however, impacted soil was left in place around and beneath active subsurface and surface pipelines. Laboratory analytical results for preliminary soil samples SS02, SS04, SS05, delineation soil samples BH02, BH03, BH04, and excavation sidewall samples SW03, SW04, SW05, SW08, and SW09 indicated that soil exceeding the Closure Criteria was left in place within 2 feet of the active pipelines. A 3% solution of Micro-Blaze™ amendment and freshwater was applied to all impacted areas that were unable to be excavated, to enhance bioremediation of the residual hydrocarbons.

District 2
Page 7

The impacted soil remaining in place is delineated laterally and vertically by excavation and delineation soil samples. An estimated 192 cubic yards of impacted soil was left in place around the 6-inch subsurface pipeline riser, area supporting 190 linear feet of twelve 3-inch steel surface oil and gas flowlines, and within one 8-inch steel oil and gas pipeline. As per XTO's safety requirements, mechanical and non-mechanical excavation methods were not to occur within 2 feet of pipelines and equipment for the safety of personnel onsite and the protection of infrastructure.

Due to the presence of active subsurface and surface pipelines, safety restrictions prevented the ability to remove all impacted soil. Therefore, XTO requests permission to backfill the onsite excavations and continue remediation of the remaining impacted soil during any future major construction or final abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in an imminent risk to human health, the environment, or groundwater. As such, XTO requests deferral of final remediation for Incident Number NRM2010853797. Upon approval of this Deferral Request, XTO will backfill the on-pad excavations with material purchased locally and recontour the Site to match pre-existing Site conditions.

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 'Anna Byers'.

Anna Byers
Staff Geologist

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

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell
United States Bureau of Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD



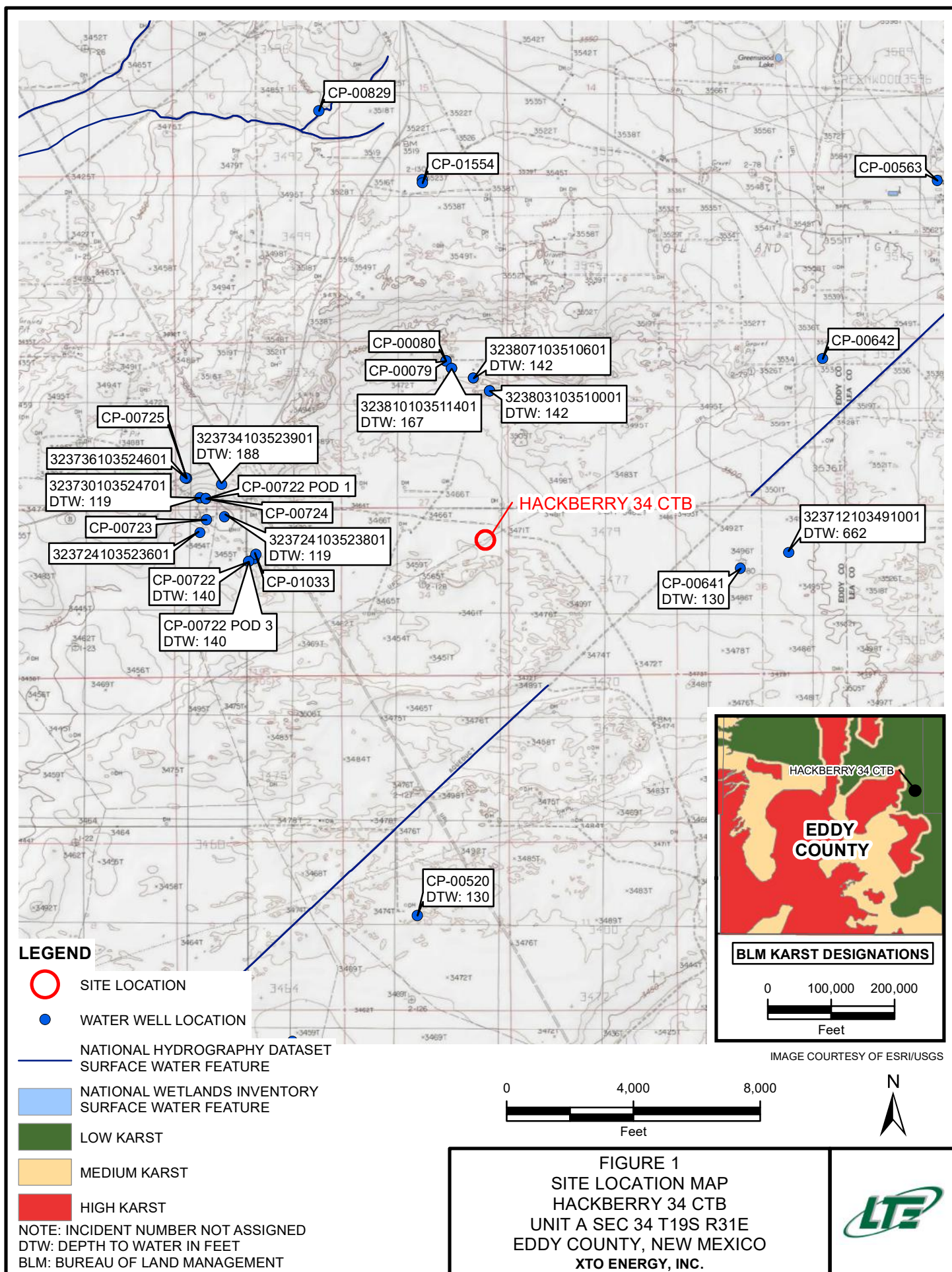
District 2
Page 8

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Delineation Soil Sample Locations
Figure 4 Excavation Soil Sample Locations
Figure 5 Deferral Area
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Records
Attachment 2 Photographic Log
Attachment 3 Lithologic Soil Sampling Logs
Attachment 4 XTO Foreign Line Crossing Guidelines Signed Letter
Attachment 5 Laboratory Analytical Reports

FIGURES





P:\XTO Energy\GIS\MXD\012920063_HACKBERRY 34 CTB\012920063_FIG01_SL_RECEPTOR_2020.mxd

**LEGEND**

RELEASE LOCATION

PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS
EXCEEDING APPLICABLE CLOSURE CRITERIA

— ELECTRIC LINE

X — X FENCE LINE

— GAS LINE

— POLY LINE

— WATER LINE

RELEASE EXTENT

NOTE: INCIDENT NUMBER NRM2010853797

IMAGE COURTESY OF ESRI

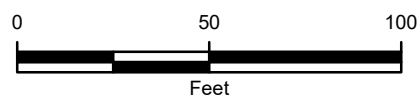


FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
HACKBERRY 34 CTB
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.





IMAGE COURTESY OF ESRI

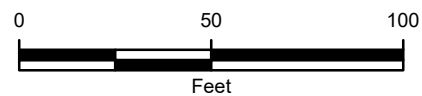
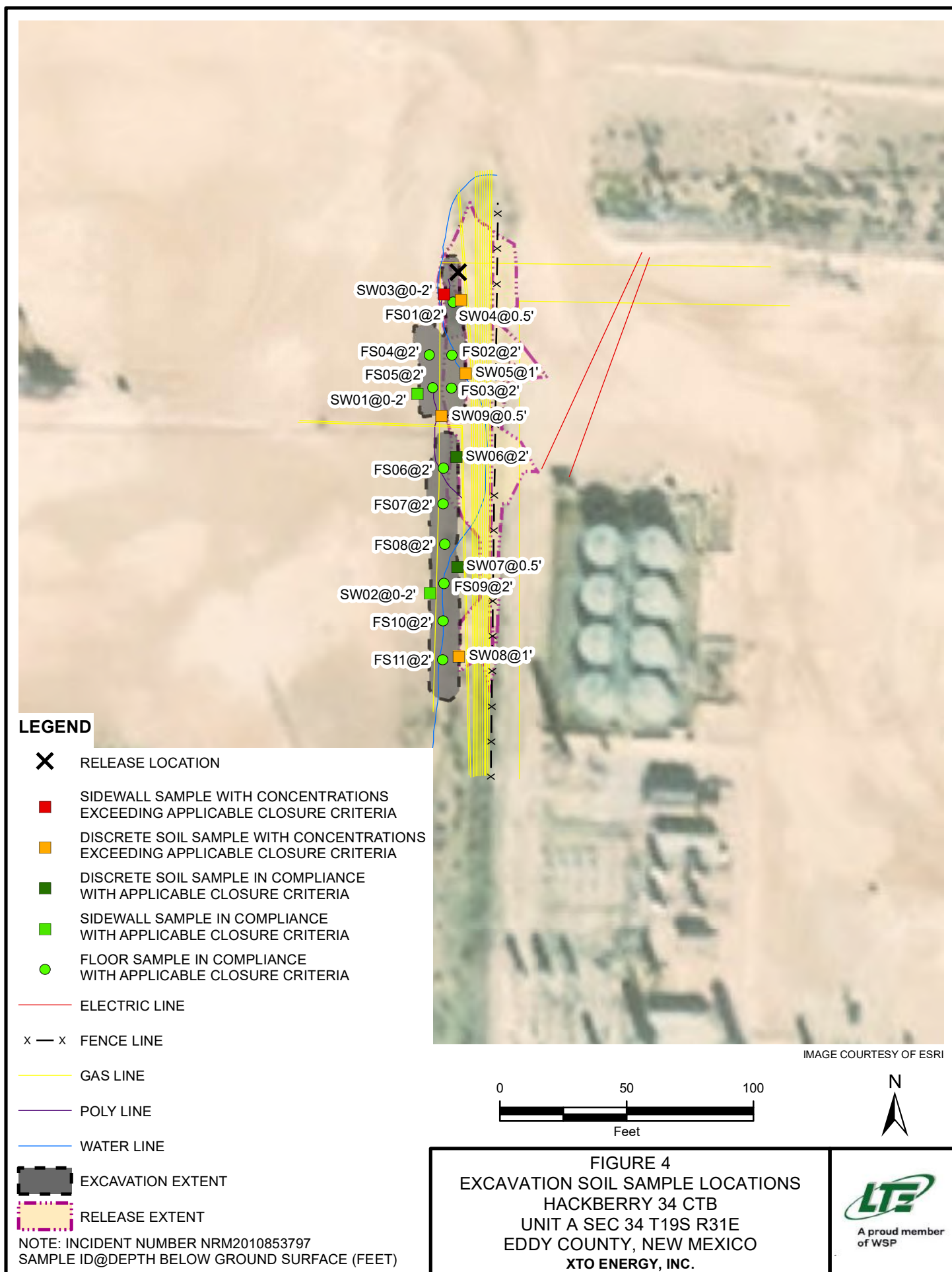


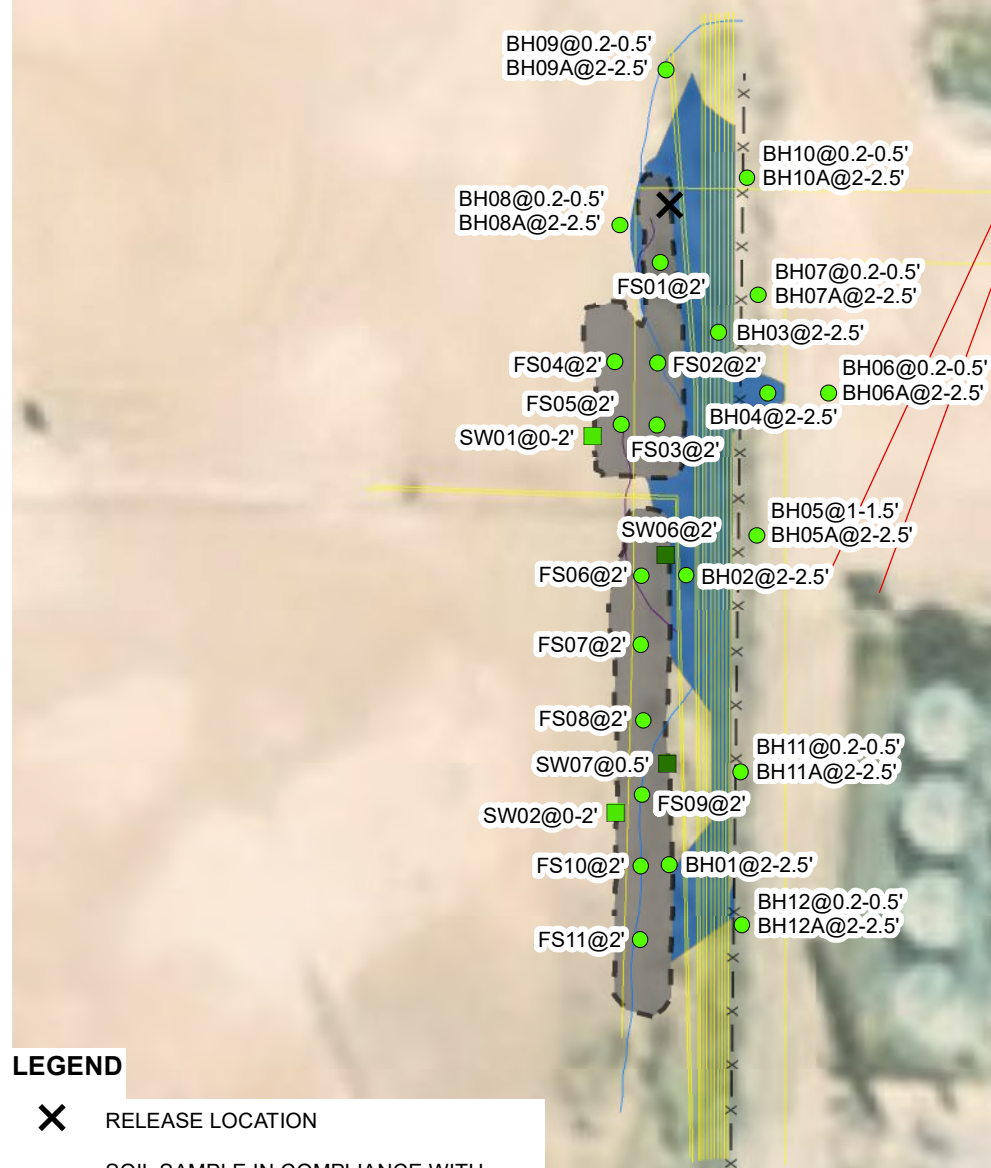
FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
HACKBERRY 34 CTB
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012920063_HACKBERRY 34 CTB\012920063_FIG03_DELINEATION_2020.mxd



P:\XTO Energy\GIS\IMXD\012920063_HACKBERRY 34 CTB\012920063_FIG04_EXCAVATION_2020.mxd

**LEGEND**

RELEASE LOCATION



SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA



SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA



DISCRETE SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

— ELECTRIC LINE

X — X FENCE LINE

— GAS LINE

— POLY LINE

— WATER LINE

EXCAVATION EXTENT

DEFERRAL AREA (2,067 SQUARE FEET)

NOTE: INCIDENT NUMBER NRM2010853797

IMAGE COURTESY OF ESRI

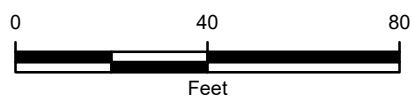


FIGURE 5
DEFERRAL AREA
HACKBERRY 34 CTB
UNIT A SEC 34 T19S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES



**TABLE 1
SOIL ANALYTICAL RESULTS**

**HACKBERRY 34 CTB
INCIDENT NUMBER NRM2010853797
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	Application
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000	IN/EX/TR
SS01	0.5	04/21/2020	4.48	54.7	35.9	66.1	161	2,470	9,200	834	11,700	12,500	10,900	EX
SS02	0.5	04/21/2020	5.71	40.0	22.0	87.0	155	3,020	10,400	904	13,400	14,300	4,010	IN/TR
SS03	0.5	04/21/2020	11.1	67.2	42.0	86.3	207	2,640	22,000	2,300	24,600	26,900	9,670	EX
SS04	0.5	04/21/2020	3.93	57.4	44.2	87.1	193	3,930	37,200	3,990	41,100	45,100	4,990	IN/TR
SS05	0.5	04/21/2020	0.206	41.1	68.1	145	254	3,310	22,200	2,200	25,500	27,700	36.7	IN/TR
BH01	0.2 - 0.5	06/04/2020	<0.251	11.5	25.0	51.1	87.6	1,470	9,500	928	11,000	11,900	NA	EX
BH01A	2 - 2.5	06/04/2020	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<50.1	251	<50.1	251	251	NA	IN
BH02	0.2 - 0.5	06/04/2020	<0.250	16.1	24.8	116	157	2,940	15,300	1,450	18,200	19,700	NA	IN/TR
BH02A	2 - 2.5	06/04/2020	<0.0196	<0.0196	0.221	0.409	0.630	<50.1	617	68.7	617	686	NA	IN
BH03	0.2 - 0.5	06/04/2020	<0.253	<0.253	<0.253	16.7	16.7	1,040	7,810	781	8,850	9,630	NA	IN/TR
BH03A	2 - 2.5	06/04/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	NA	IN
BH04	0.2 - 0.5	07/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<499	9,240	1,210	9,240	10,500	3,480	IN/TR
BH04A	2 - 2.5	07/09/2020	<0.0101	<0.0101	<0.0101	<0.0101	<0.0101	<50.2	<50.2	<50.2	<50.2	<50.2	16.9	IN
BH05	1 - 1.5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	<9.94	IN
BH05A	2 - 2.5	07/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	21.4	IN
BH06	0.2 - 0.5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	188	IN
BH06A	2 - 2.5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	187	IN
BH07	0.2 - 0.5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	206	IN
BH07A	2 - 2.5	07/09/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	13.4	IN
BH08	0.2 - 0.5	07/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	113	IN
BH08A	2 - 2.5	07/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	<9.98	IN
BH09	0.2 - 0.5	07/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	823	IN
BH09A	2 - 2.5	07/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	58.5	IN



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**TABLE 1
SOIL ANALYTICAL RESULTS**

**HACKBERRY 34 CTB
INCIDENT NUMBER NRM2010853797
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	Application
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000	IN/EX/TR
BH10	0.2 - 0.5	07/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	587	IN
BH10A	2 - 2.5	07/17/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	53.4	IN
BH11	0.2 - 0.5	07/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	44.6	IN
BH11A	2 - 2.5	07/17/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	259	IN
BH12	0.2 - 0.5	07/17/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	59.8	<50.2	59.8	59.8	<9.92	IN
BH12A	2 - 2.5	07/17/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	<9.96	IN
SW01	0 - 2	07/09/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	144	IN
SW02	0 - 2	07/09/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	55.5	IN
SW03	0 - 2	07/13/2020	<0.0253	3.64	6.77	14.6	25.0	767	4,310	308	5,080	5,390	304	IN/TR
SW04	0.5	07/13/2020	<0.100	1.67	2.65	10.2	14.5	705	9,080	859	9,790	10,600	8,020	IN/TR
SW05	1	07/13/2020	<0.0998	<0.0998	<0.0998	22.1	22.1	1,490	9,980	923	11,500	12,400	725	IN/TR
SW06	2	07/13/2020	<0.00200	<0.00200	<0.00200	0.0229	0.0229	<50.2	<50.2	<50.2	<50.2	<50.2	39.8	IN/TR
SW07	0.5	07/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	120	IN/TR
SW08	1	07/13/2020	<0.0105	0.112	0.603	1.32	2.03	1,050	11,900	1,400	13,000	14,400	130	IN/TR
SW09	0.5	07/13/2020	2.70	48.3	45.1	124	220	3,010	16,300	1,560	19,300	20,900	751	IN/TR
FS01	2	07/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	195	IN
FS02	2	07/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	209	IN
FS03	2	07/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	73.9	IN
FS04	2	07/13/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	25.6	IN
FS05	2	07/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	83.8	IN
FS06	2	07/13/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	34.4	IN
FS07	2	07/13/2020	<0.00971	<0.00971	<0.00971	<0.00971	<0.00971	<49.9	547	<49.9	547	547	37.3	IN
FS08	2	07/13/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	24.0	IN



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**TABLE 1
SOIL ANALYTICAL RESULTS**

**HACKBERRY 34 CTB
INCIDENT NUMBER NRM2010853797
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	Application
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000	IN/EX/TR
FS09	2	07/13/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	18.3	IN
FS10	2	07/13/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	15.3	IN
FS11	2	07/13/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	25.4	IN

Notes:

GRO - gasoline range organics

DRO - diesel range organics

ORO - motor oil range organics

TPH - total petroleum hydrocarbons

BTEX - benzene, toluene, ethylbenzene, and total xylenes

NMOCD - New Mexico Oil Conservation Division

mg/kg - milligrams per kilogram

bgs - below ground surface

NE - not established

NA - not analyzed

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

IN - In-situ

EX - Excavated

TR - Treated with 3% Micro-Blaze Emergency Spill Control Solution

Table 1 - closure criteria for soils impacted by a release

per New Mexico Administrative Code (NMAC) 19.15.29 August 2018

ATTACHMENT 1: REFERENCED WELL RECORDS





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Geographic Area:
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- 323803103510001

Minimum number of levels = 1
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USGS 323803103510001 19S.31E.27.21000

Eddy County, New Mexico
Latitude 32°38'03", Longitude 103°51'00" NAD27
Land-surface elevation 3,503 feet above NAVD88
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1966-05-12			D	170.00		2	S	U		U	A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1968-04-03		D	142.63			2		U		U	A
1971-02-01		D	142.71			2		U		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Status	S	Nearby site that taps the same aquifer was being pumped.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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- 323724103523801

Minimum number of levels = 1
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USGS 323724103523801 19S.31E.28.33433

Eddy County, New Mexico
Latitude 32°37'24", Longitude 103°52'38" NAD27
Land-surface elevation 3,450 feet above NAVD88
This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data

Tab-separated data

Graph of data

Reselect period

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1948-11-29			D	102.95		2		U		U	A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1994-03-18			D	118.95		2		S		U	A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	S	Steel-tape measurement.
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Search Results -- 1 sites found

Agency code = usgs
site_no list =

- 323712103491001

Minimum number of levels = 1
[Save file of selected sites](#) to local disk for future upload

USGS 323712103491001 19S.32E.31.114

Lea County, New Mexico
Latitude 32°37'12", Longitude 103°49'10" NAD27
Land-surface elevation 3,497 feet above NAVD88

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	Water-level accuracy	Status	Method of measurement	Measuring agency	Source of measurement	Water-level approval status
1966-09			M	520.99		2		U			A
1967-07			M	505.13		2		U			A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1967-09			M	509.01		2			U		A
1967-11			M	512.48		2			U		A
1968-01			M	515.69		2			U		A
1968-03			M	518.52		2			U		A
1968-05			M	522.00		2			U		A
1968-07			M	526.58		2			U		A
1968-09			M	530.39		2			U		A
1968-11			M	533.84		2			U		A
1969-01			M	537.05		2			U		A
1969-03			M	541.13		2			U		A
1969-05			M	544.58		2			U		A
1969-07			M	548.44		2			U		A
1969-09			M	552.13		2			U		A
1969-11			M	554.67		2			U		A
1970-01			M	557.43		2			U		A
1970-03			M	559.31		2			U		A
1970-05			M	562.96		2			U		A
1970-07			M	567.33		2			U		A
1970-09			M	571.52		2			U		A
1970-11			M	574.17		2			U		A
1971-01			M	578.01		2			U		A
1971-03			M	581.12		2			U		A
1971-05			M	586.52		2			U		A
1971-07			M	590.76		2			U		A
1971-09			M	594.35		2			U		A
1971-11			M	596.95		2			U		A
1972-01			M	599.42		2			U		A
1972-03			M	602.20		2			U		A
1972-05			M	605.47		2			U		A
1972-07			M	608.63		2			U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1972-09			M	611.34		2			U		A
1972-11			M	612.87		2			U		A
1973-01			M	614.92		2			U		A
1973-03			M	615.85		2			U		A
1973-05			M	620.70		2			U		A
1973-07			M	623.66		2			U		A
1973-09			M	630.33		2			U		A
1973-11			M	632.88		2			U		A
1974-01			M	636.38		2			U		A
1974-03			M	639.41		2			U		A
1974-05			M	645.14		2			U		A
1974-09			M	651.25		2			U		A
1975-03-21			D	655.79		2			U		A
1975-03-22			D	655.66		2			U		A
1975-03-23			D	655.60		2			U		A
1975-03-24			D	655.85		2			U		A
1975-03-25			D	655.86		2			U		A
1975-03-26			D	655.65		2			U		A
1975-03-27			D	655.70		2			U		A
1975-03-28			D	655.88		2			U		A
1975-03-29			D	656.05		2			U		A
1975-03-30			D	656.10		2			U		A
1975-03-31			D	655.89		2			U		A
1975-04-01			D	655.96		2			U		A
1975-04-02			D	656.14		2			U		A
1975-04-03			D	656.29		2			U		A
1975-04-04			D	656.20		2			U		A
1975-04-05			D	656.25		2			U		A
1975-04-06			D	656.23		2			U		A
1975-04-07			D	656.07		2			U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-04-08			D 656.28			2			U		A
1975-04-09			D 656.48			2			U		A
1975-04-10			D 656.42			2			U		A
1975-04-11			D 656.63			2			U		A
1975-04-12			D 656.62			2			U		A
1975-04-13			D 656.55			2			U		A
1975-04-14			D 656.71			2			U		A
1975-04-15			D 656.75			2			U		A
1975-04-16			D 656.70			2			U		A
1975-04-17			D 656.58			2			U		A
1975-04-18			D 656.62			2			U		A
1975-04-19			D 656.93			2			U		A
1975-04-20			D 656.96			2			U		A
1975-04-21			D 657.05			2			U		A
1975-04-22			D 657.03			2			U		A
1975-04-23			D 657.02			2			U		A
1975-04-24			D 657.04			2			U		A
1975-04-25			D 657.06			2			U		A
1975-04-26			D 657.02			2			U		A
1975-04-27			D 657.03			2			U		A
1975-04-28			D 657.17			2			U		A
1975-04-29			D 657.12			2			U		A
1975-04-30			D 657.32			2			U		A
1975-05-01			D 657.41			2			U		A
1975-05-02			D 657.41			2			U		A
1975-05-03			D 657.51			2			U		A
1975-05-04			D 657.46			2			U		A
1975-05-05			D 657.42			2			U		A
1975-05-06			D 657.53			2			U		A
1975-05-07			D 657.59			2			U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-05-08			D 657.70			2			U		A
1975-05-09			D 657.81			2			U		A
1975-05-10			D 657.88			2			U		A
1975-05-11			D 657.87			2			U		A
1975-05-12			D 657.82			2			U		A
1975-05-13			D 657.82			2			U		A
1975-05-14			D 657.97			2			U		A
1975-05-15			D 658.03			2			U		A
1975-05-16			D 658.02			2			U		A
1975-05-17			D 658.10			2			U		A
1975-05-18			D 658.18			2			U		A
1975-05-19			D 658.17			2			U		A
1975-05-20			D 658.10			2			U		A
1975-05-21			D 658.22			2			U		A
1975-05-22			D 658.23			2			U		A
1975-05-23			D 658.42			2			U		A
1975-05-24			D 658.44			2			U		A
1975-05-25			D 658.45			2			U		A
1975-05-26			D 658.63			2			U		A
1975-05-27			D 658.60			2			U		A
1975-05-28			D 658.47			2			U		A
1975-05-29			D 658.55			2			U		A
1975-05-30			D 658.76			2			U		A
1975-05-31			D 658.77			2			U		A
1975-06-01			D 658.83			2			U		A
1975-06-02			D 658.93			2			U		A
1975-06-03			D 658.88			2			U		A
1975-06-04			D 658.89			2			U		A
1975-06-05			D 659.00			2			U		A
1975-06-06			D 659.10			2			U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-06-07			D 659.13			2			U		A
1975-06-08			D 659.16			2			U		A
1975-06-09			D 659.21			2			U		A
1975-06-10			D 659.35			2			U		A
1975-06-11			D 659.50			2			U		A
1975-06-13			D 659.53			2			U		A
1975-06-14			D 659.52			2			U		A
1975-06-15			D 659.61			2			U		A
1975-06-16			D 659.57			2			U		A
1975-06-17			D 659.61			2			U		A
1975-06-18			D 659.67			2			U		A
1975-06-19			D 659.87			2			U		A
1975-06-20			D 659.97			2			U		A
1975-06-21			D 660.01			2			U		A
1975-06-22			D 660.09			2			U		A
1975-06-23			D 660.22			2			U		A
1975-06-24			D 660.32			2			U		A
1975-06-25			D 660.28			2			U		A
1975-06-26			D 660.28			2			U		A
1975-06-27			D 660.36			2			U		A
1975-06-28			D 660.42			2			U		A
1975-06-29			D 660.53			2			U		A
1975-06-30			D 660.65			2			U		A
1975-07-01			D 660.73			2			U		A
1975-07-02			D 660.82			2			U		A
1975-07-03			D 660.88			2			U		A
1975-07-04			D 660.95			2			U		A
1975-07-05			D 660.94			2			U		A
1975-07-06			D 660.93			2			U		A
1975-07-07			D 661.02			2			U		A

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1975-07-08			D 661.13			2			U		A
1975-07-09			D 661.15			2			U		A
1975-07-10			D 661.16			2			U		A
1975-07-11			D 661.21			2			U		A
1975-07-12			D 661.22			2			U		A
1975-07-13			D 661.29			2			U		A
1975-07-14			D 661.34			2			U		A
1975-07-15			D 661.45			2			U		A
1975-07-16			D 661.51			2			U		A
1975-07-17			D 661.56			2			U		A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level date-time accuracy	M	Date is accurate to the Month
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

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0,28 0,25 nadww01



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USGS 323734103523901 19S.31E.28.33124

Eddy County, New Mexico
Latitude 32°37'34", Longitude 103°52'39" NAD27
Land-surface elevation 3,473 feet above NAVD88
The depth of the well is 230 feet below land surface.
This well is completed in the Rustler Formation (312RSLR) local aquifer.

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Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status

Date	Time	? Water-level date-time accuracy	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Water-level accuracy	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1977-12-15			D	186.87		2			U		A
1983-01-19			D	187.53		2			U		A
1988-02-23			D	188.02		2			U		A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Water-level accuracy	2	Water level accuracy to nearest hundredth of a foot
Status		The reported water-level measurement represents a static level
Method of measurement	U	Unknown method.
Measuring agency		Not determined
Source of measurement	U	Source is unknown.
Water-level approval status	A	Approved for publication -- Processing and review completed.

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0.26 0.24 nadww01





New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)				(NAD83 UTM in meters)			
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
	CP 00520	4	4	1	10	20S	31E	607163	3606278*
Driller License: 46		Driller Company:		ABBOTT BROTHERS COMPANY					
Driller Name:		ABBOTT, MURRELL							
Drill Start Date: 07/23/1973		Drill Finish Date:		07/25/1973		Plug Date:			
Log File Date: 07/31/1973		PCW Rev Date:				Source:		Shallow	
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size: 7.00		Depth Well:		280 feet		Depth Water:		130 feet	
Water Bearing Stratifications:		Top	Bottom	Description					
		176	190	Sandstone/Gravel/Conglomerate					

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)				(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y		
	CP 00722 POD3	2	4	1	33	19S	31E	605519	3609673*		
x											
Driller License:	1058	Driller Company:				KEY'S DRILLING & PUMP SERVICE					
Driller Name:	KEY, CASEY										
Drill Start Date:	05/02/2011	Drill Finish Date:				05/04/2011		Plug Date:			
Log File Date:	05/17/2011	PCW Rev Date:				Source:				Shallow	
Pump Type:		Pipe Discharge Size:				Estimated Yield:				100 GPM	
Casing Size:	5.00	Depth Well:				220 feet		Depth Water:		140 feet	
x											
Water Bearing Stratifications:					Top	Bottom	Description				
					140	150	Sandstone/Gravel/Conglomerate				
					170	220	Sandstone/Gravel/Conglomerate				

*UTM location was derived from PLSS - see Help

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8/10/20 1:51 PM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(quarters are smallest to largest)		(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tw	Rng	X	Y
	CP 00641 POD1	4	1	36	19S	31E		610247	3609634* 
Driller License:	882	Driller Company:		LARRY'S DRILLING & PUMP CO.					
Driller Name:	FELKINS, LARRY								
Drill Start Date:	02/11/1982	Drill Finish Date:		02/12/1982		Plug Date:			
Log File Date:	02/23/1982	PCW Rcv Date:				Source:		Shallow	
Pump Type:		Pipe Discharge Size:				Estimated Yield:			
Casing Size:		Depth Well:		300 feet		Depth Water:		130 feet	

*UTM location was derived from PLSS - see Help

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8/10/20 1:56 PM

POINT OF DIVERSION SUMMARY

ATTACHMENT 2: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: Northern view of the release during the Site assessment.



Photograph 2: Eastern view of the Site during delineation activities.



Photograph 3: Northern view of the Site during delineation activities.



Photograph 4: Western view of the Site during delineation activities.

Hackberry 34 CTB
32.6224644N, 103.85178386W
Photographs Taken: April 21, 2020 to July 13, 2020

PHOTOGRAPHIC LOG



Photograph 5: Northern view of the Site during delineation activities.



Photograph 6: Western view of the Site during delineation activities.



Photograph 7: View of the Site prior to excavation activities.



Photograph 8: Mixing 3% Micro-Blaze solution prior to application.

Hackberry 34 CTB
32.6224644N, 103.85178386W
Photographs Taken: April 21, 2020 to July 13, 2020

PHOTOGRAPHIC LOG



Photograph 9: Excavation activities in the southern release area.



Photograph 10: Excavation activities in the northern release area.



Photograph 11: Final northern excavation extent.



Photograph 12: Final southern excavation extent.

Hackberry 34 CTB
32.6224644N, 103.85178386W
Photographs Taken: April 21, 2020 to July 13, 2020

PHOTOGRAPHIC LOG



Photograph 13: Southeast view of the excavation.



Photograph 14: Northern portion of the excavation, viewing south.



Photograph 15: Southeast view of the deferral area in blue.



Photograph 16: Northern portion of the deferral area in blue, viewing south.

Hackberry 34 CTB
32.6224644N, 103.85178386W
Photographs Taken: April 21, 2020 to July 13, 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:

BH#1

Date:

6/14/20

Site Name: Hackberry 34 CTB

RP or Incident Number: NEM 2010853797

LTE Job Number: 012920063

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

32.62211361, -103.85179933

Field Screening:

Chloride, PID

Logged By: Anna Byers

Method:

Hand Auger

Hole Diameter:

2.5"

Total Depth:

2.5'

Comments:

BDL - Below detection limit of HACH Low Range Cl- Strips; 1pt soil; 4pt H₂O dilution (distilled)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
m	BDL	1706	Y	BH#1	0.2-0.5	0	3m	light brown poorly-graded silty sand (f.); low plasticity, odor & trace organics
m	BDL	258	Y		1-1.5	1	SP-SC	brown poorly-graded sand (f.) with clay; low plasticity, odor & trace organics
m	BDL	156	N	BH#1A	2-2.5	2	SC	brown poorly-graded sand (f.); clayey
m	BDL	93.8	N		3-3.5	3	SC	moderate plasticity, odor, trace organics
m	BDL	23.2	N	BH#1B	4-4.5	4	SC	↓
						5		TOT DEPTH
						6		
						7		
						8		
						9		
						10		
						11		
						12		



LT Environmental, Inc.
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Carlsbad, New Mexico 88220

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BH or PH Name:

BH02

Date:

6/4/08

Site Name: Hackberry 34 CTB

RP or Incident Number: NRM2010853797

LTE Job Number: 012920063

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

32.62227928, -103.85178679

Field Screening:

Chloride, PID

Logged By: Anna Byers

Method: Hand Auger

Hole Diameter:

2.5"

Total Depth:

4.5'

Comments:

BDL - Below Detection Limit of HACH Low Range Cl⁻ Strips; 1pt soil : 4 pt distilled H₂O

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
M	128	32.7	Y	BH02	0-0.5	0	SM	light brown poorly-graded silty sand (f.); no plasticity, organics, odor
M	212	222.9	N		1-1.5	1	SM	brown poorly-graded silty sand (f.); no plasticity, organics, odor
M	BDL	87.7	N	BH02A	2-2.5	2	SP-SC	grey poorly graded sand (f.) w/ clay; moderate plasticity, organics, odor
M	BDL	390.7	N		3-3.5	3	SP-SC	
M	128	129.5	N	BH02B	4-4.5	4	SP-SC	
						5		TOT DEPTH
						6		
						7		
						8		
						9		
						10		
						11		
						12		



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

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BH or PH Name:

BHP3

Date:

6/4/20

Site Name: Hackberry 34 CTB

RP or Incident Number: NEM2019853797

LTE Job Number: 012920063

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

32.6224182, -103.85176431

Field Screening:

Chloride, PID

Logged By: Anna Byers

Method: Hand Auger

Hole Diameter:

2.5"

Total Depth:

4.5'

Comments:

BDL - Below Detection Limit of HACH Low Range Cl⁻ Strips; 1pt soil: 4 pt distilled H₂O dilution

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
M	1216	75000	Y	BHP3	0-0.5		SP	brown poorly-graded sand (m.); no plasticity, odor, organics
						1		
M	636	102.1	N		1-1.5		SM	brown poorly-graded sand (f.) with silt; no plasticity, odor, organics
						2		
M	320	41.3	N	BHP3A	2-2.5		SP-SC	grey poorly-graded sand (f.) with clay; moderate plasticity, odor
						3		
M	BDL	50.7	N		3-3.5		SP-SC	
						4		
D	BDL	37.2	N	BHP3B	4-4.5		SP-SC	
						5		TOT DEPTH
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:			
		BHP4		7/9/20			
		Site Name: Hackberry 34 CTB					
		RP or Incident Number: NEM2010853797					
LTE Job Number: 012920063							
LITHOLOGIC / SOIL SAMPLING LOG							
Lat/Long:		Field Screening:		Logged By: Anna Byers			
32.6223833, -103.8517312		Chloride, PID		Method: Hand Auger			
		Hole Diameter:		Total Depth:			
		2.5"		2.5'			
Comments:							
BDL - Below Detection Limit of HACH Low Range Cl ⁻ strip; 1 pt soil: 4 pt distilled H ₂ O							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	3176	112.1	Y	BHP4	0.2-0.5	cche + sm	pad surface caliche, compact brown poorly-graded sand (m.) with silt; odor, low plasticity, trace organics
D	-	29.6	N		1-1.5	sm	brown poorly-graded silty sand(f.); odor, low plasticity, trace organics
M	BDL	22.9	N	BHP4A	2-2.5	sm	" no odor
					3		TOT DEPTH
					4		
					5		
					6		
					7		
					8		
					9		
					10		
					11		
					12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name: BHP5		Date: 7/9/20				
		Site Name: Hackberry 34 CTB						
		RP or Incident Number: NEM2010853797						
		LTE Job Number: 012920063						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.62230174, -103.85173913		Field Screening: Chloride, PID		Hole Diameter: 2.5"				
				Total Depth: 2.5'				
Comments: [Cl ⁻] not field screened due to all [Cl ⁻] below 20,000 ppm for initial samples (std)								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	-	0.7	N		0-0.5'	0	che	compact, pad surface, caliche, no odor
D	-	8.9	N	BHP5	1-1.5'	1	che	↓
D	-	9.4	N	BHP5A	2-2.5'	2	che	
TOT DEPTH								
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name: BHP6		Date: 7/9/20				
		Site Name: Hackberry 34 CTB						
		RP or Incident Number: NEM2010853797						
		LTE Job Number: 012920063						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.62238335, -103.85169016		Field Screening: Chloride, PID		Logged By: Anna Byers Hole Diameter: 2.5" Method: Hand Auger Total Depth: 2.5'				
Comments: [Cl-] not field screened due to all [Cl-] below 20,000 ppm std for initial release samples								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	-	2.8*	N	BHP6	0-2.5'	0	cche	compact, pad surface caliche (pink) no odor
D	-	0	N		1-1.5'	1	cche	↓
m	-	0	N	BHP6	2-2.5'	2	sm	brown, poorly-graded silty sand (f.); no odor, low plasticity. trace organics
						3		TOT DEPTH
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		



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Carlsbad, New Mexico 88220

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BH or PH Name:

BH#7

Date:

7/9/20

Site Name: Hickberry 34 CTB

RP or Incident Number: NM2010853797

LTE Job Number: 012920063

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Anna Byers

Method: Hand Auger

Hole Diameter:

2.5"

Total Depth:

2'

Lat/Long:

32.62243966, -106.85173724

Field Screening:

Chloride, PID

Comments:

[Cl⁻] not field screened due to all [Cl⁻] below 20,000 ppm (std) for initial release samples

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	—	Ø	N	BH#7	0-2.45'	0	cche	compact, pad surface caliche (pink) no odor
D	—	Ø	N		1-1.5'	1	sm	brown poorly-graded silty sand (f.) with trace organics; no odor, no plasticity
m	—	Ø.2	N	BH#7A	2-2.5'	2	SP-SC	brown-grey poorly-graded sand (f.) with clay; no odor, moderate plasticity
						3		TOT DEPTH
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name: <u>BH78</u>		Date: <u>7/17/20</u>				
		Site Name: <u>Hackberry 34 CTB</u>		RP or Incident Number: <u>NRM2010853797</u>				
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: <u>Anna Byers</u>		Method: <u>Hand Auger</u>				
Lat/Long: <u>32.62247964, -103.85183061</u>		Field Screening: <u>Chloride, PID</u>		Hole Diameter: <u>2.5"</u>				
Total Depth: <u>2.5'</u>								
Comments: <u>BDL - Below Detection Limit of HACH Low Range Cl Strips; 1pt soil: 4pt distilled H₂O dilution</u>								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	BDL	Ø	N	BH78B	0.2-0.5'	0	sm	brown poorly-graded silty sand (f.); no odor, low plasticity, trace organics ↓ Tot DEPTH
D	BDL	Ø	N		1-1.5'	1	sm	
M	BDL	Ø	N	BH78A	2-2.5'	2	sm	
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:			
		BH09		7/17/20			
		Site Name: Hackberry 34 CTB					
		RP or Incident Number: NEM 2010853797					
LTE Job Number: 012920063							
LITHOLOGIC / SOIL SAMPLING LOG							
Lat/Long:		Field Screening:		Logged By:			
32.62256876, -103.85179909		Chloride, PID		Anne Byers			
		Hole Diameter:		Method: Hand Auger			
		2.5"		Total Depth: 2.5'			
Comments:							
BDL - Below detection limit of HACH Low Range Cl- Shps; 1 pt soil: 4 pt distilled H2O							
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	820	0	N	BH09	0-2.5'	cche	pad caliche, no odor
M	BDL	0	N		1-1.5'	sp-sm	brown poorly-graded sand (m.) with silt & gravel; low plasticity, no odor, trace organics
M	BDL	0	N	BH09A	2-2.5'	SP-sm	
						3	TOT DEPTH
						4	
						5	
						6	
						7	
						8	
						9	
						10	
						11	
						12	

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name:		Date:				
		BH10		7/17/20				
		Site Name: Hackberry 34 CIB						
		RP or Incident Number: NEM2010853797						
Lat/Long:		Field Screening:		Hole Diameter:				
32.62250642, -103.8517448		Chloride, PID		2.5"				
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers		Method: Hand Auger				
Total Depth: 2.5'								
Comments:								
BDL - Below Detection Limit of HACH Low Range Cl ⁻ Ships; 1 pt soil: 4 pt distilled H ₂ O								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	352	Ø	No	BH10	0.2-0.5'	0	cche	pad caliche, no odor
M	BDL	Ø	N		1-1.5'	1	sm	brown poorly-graded silty sand(f.) low plasticity, no odor, trace organics ↓
M	BDL	Ø	N	BH10A	2-2.5'	2	sm	
					3		TOT DEPTH	
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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BH or PH Name:

BH11

Date:

7/17/20

Site Name:

Hackberry 34 CTB

RP or Incident Number:

NRH2010853797

LTE Job Number:

012920063

Logged By:

Anna Byers

Method:

Hand Auger

Hole Diameter:

2.5"

Total Depth:

2.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

32.6221665, -103.8517506

Field Screening:

Chloride, PID

Comments:

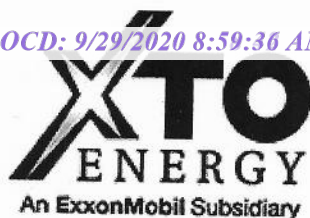
BDL - Below detection limit of HACH Low Range Cl⁻ test strips; 1pt soil: 4pt distilled H₂O

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	BDL	Ø	N _o	BH11	0-2.5'	0	cche	pad caliche, no odor
D	BDL	Ø	N		1-1.5'	1	sm	brown poorly-graded silty sand (f.); no odor, trace organics, low plasticity
D	BDL	Ø	N	BH11A	2-2.5'	2	sm	
						3		TOT DEPTH
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 A proud member of WSP Compliance · Engineering · Remediation		BH or PH Name: BH12		Date: 7/17/20				
		Site Name: Hackberry 34 CTB						
		RP or Incident Number: NEM 2018053797						
		LTE Job Number: 012920063						
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.62207908, -103.85175003		Field Screening: Chloride, PID		Hole Diameter: 2.5"				
				Total Depth: 2.5'				
Comments: BDL - Below Detection Limit of HACH Low Range CI Test Strips; 1 pt soil: 4 pt distilled H ₂ O								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	268	Ø	No	BH12	0-0.5'	0	cche	pad caliche, no odor
D	BDL	Ø	N		1-1.5'	1	sm	brown poorly-graded silty sand (f.); low plasticity, no odor, trace organics
D	BDL	Ø	N	BH12A	2-2.5'	2	sm	
						3		TOT DEPTH
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

ATTACHMENT 4: XTO FOREIGN LINE CROSSING GUIDELINES SIGNED LETTER





XTO Foreign Line Crossing Guidelines:

1. The XTO line shall be located approximately 50 feet on each side of the point of crossing to verify the direction of the pipeline. The method used to locate the existing pipeline (probing, pipe locator, hydrovac) shall be at the sole discretion of the XTO Representative.
2. When excavating parallel to and closer than 25 feet to an existing XTO pipeline, the pipeline shall be located at least every 200 feet through straight segments and at least every 50 feet in other areas. The method used to locate the existing pipeline (probing, pipe locator, hydrovac) shall be at the sole discretion of the XTO Representative.
3. Excavation by machine shall be limited to no closer than 2 feet in any direction to the pipeline.
4. The pipeline shall then be exposed and positively located by hand excavation.
5. After the pipeline is exposed, and only while a XTO Representative is on site, excavation by machine is permitted to within one foot in any direction of the pipeline. The remaining excavation must be hand dug. In the sole judgement of the XTO Representative, excavation by machine may be limited to distance greater than those described above due to soil conditions or other extenuating factors.
6. The ditch shall be finished to a depth necessary to maintain a minimum cover (including sags and overbends) as measured from top of pipe.
7. The minimum distance/clearance between XTO's pipeline and the subject crossing pipeline or casing is 24" or the same size of XTO's pipeline, whichever is greater.

8.

XTO Representative  Date _____

Third-Party Representative _____ Date _____

Location: Hackberry 34 CTB (32.622056, -103.851442)Sec: 34 Twn: 19S Rng: 31E

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS





Analytical Report 659414

for

LT Environmental, Inc.

Project Manager: Kalei Jennings

Hackberry 34 CTB

012920063

04.23.2020

Collected By: Client

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

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

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

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



04.23.2020

Project Manager: **Kalei Jennings**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **659414**

Hackberry 34 CTB

Project Address:

Kalei Jennings:

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) 659414. 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. 659414 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

A Small Business and Minority Company

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



Sample Cross Reference 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04.21.2020 13:21	0.5 ft	659414-001
SS02	S	04.21.2020 13:24	0.5 ft	659414-002
SS03	S	04.21.2020 13:29	0.5 ft	659414-003
SS04	S	04.21.2020 13:32	0.5 ft	659414-004
SS05	S	04.21.2020 13:38	0.5 ft	659414-005



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hackberry 34 CTB*

Project ID: 012920063
Work Order Number(s): 659414

Report Date: 04.23.2020
Date Received: 04.21.2020

Sample receipt non conformances and comments:

Samples received in bulk containers.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3123744 TPH by SW8015 Mod

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

Samples affected are: 659414-002.



Certificate of Analysis Summary 659414

LT Environmental, Inc., Arvada, CO

Project Name: Hackberry 34 CTB

Project Id: 012920063
Contact: Kalei Jennings
Project Location:

Date Received in Lab: Tue 04.21.2020 16:00
Report Date: 04.23.2020 11:16
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	659414-001	659414-002	659414-003	659414-004	659414-005	
	Field Id:	SS01	SS02	SS03	SS04	SS05	
	Depth:	0.5- ft	0.5- ft	0.5- ft	0.5- ft	0.5- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	04.21.2020 13:21	04.21.2020 13:24	04.21.2020 13:29	04.21.2020 13:32	04.21.2020 13:38	
BTEX by EPA 8021B	Extracted:	04.21.2020 18:11	04.21.2020 18:11	04.21.2020 18:11	04.21.2020 18:11	04.21.2020 18:11	
	Analyzed:	04.22.2020 18:55	04.22.2020 19:16	04.22.2020 19:36	04.22.2020 20:58	04.22.2020 12:27	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		4.48 0.400	5.71 0.399	11.1 0.400	3.93 0.400	0.206 0.0998	
Toluene		54.7 0.400	40.0 0.399	67.2 0.400	57.4 0.400	41.1 0.399	
Ethylbenzene		35.9 0.400	22.0 0.399	42.0 0.400	44.2 0.400	68.1 0.399	
m,p-Xylenes		45.6 0.800	57.9 0.798	57.6 0.800	58.7 0.800	96.9 0.798	
o-Xylene		20.5 0.400	29.1 0.399	28.7 0.400	28.4 0.400	47.6 0.399	
Total Xylenes		66.1 0.400	87.0 0.399	86.3 0.400	87.1 0.400	145 0.399	
Total BTEX		161 0.400	155 0.399	207 0.400	193 0.400	254 0.0998	
Chloride by EPA 300	Extracted:	04.21.2020 17:21	04.21.2020 17:21	04.22.2020 07:30	04.22.2020 07:30	04.22.2020 07:30	
	Analyzed:	04.21.2020 22:20	04.21.2020 22:26	04.22.2020 08:16	04.22.2020 08:43	04.22.2020 08:53	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		10900 198	4010 199	9670 199	4990 200	36.7 9.98	
TPH by SW8015 Mod	Extracted:	04.21.2020 17:30	04.21.2020 17:30	04.21.2020 17:30	04.21.2020 17:30	04.21.2020 17:30	
	Analyzed:	04.21.2020 22:20	04.21.2020 22:41	04.21.2020 23:01	04.22.2020 09:43	04.21.2020 23:41	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		2470 251	3020 249	2640 249	3930 498	3310 250	
Diesel Range Organics (DRO)		9200 251	10400 249	22000 249	37200 498	22200 250	
Motor Oil Range Hydrocarbons (MRO)		834 251	904 249	2300 249	3990 498	2200 250	
Total GRO-DRO		11700 251	13400 249	24600 249	41100 498	25500 250	
Total TPH		12500 251	14300 249	26900 249	45100 498	27700 250	

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 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS01** Matrix: Soil Date Received: 04.21.2020 16:00
 Lab Sample Id: 659414-001 Date Collected: 04.21.2020 13:21 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.21.2020 17:21 Basis: Wet Weight
 Seq Number: 3123703

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10900	198	mg/kg	04.21.2020 22:20		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.21.2020 17:30 Basis: Wet Weight
 Seq Number: 3123744

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2470	251	mg/kg	04.21.2020 22:20		5
Diesel Range Organics (DRO)	C10C28DRO	9200	251	mg/kg	04.21.2020 22:20		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	834	251	mg/kg	04.21.2020 22:20		5
Total GRO-DRO	PHC628	11700	251	mg/kg	04.21.2020 22:20		5
Total TPH	PHC635	12500	251	mg/kg	04.21.2020 22:20		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	04.21.2020 22:20	
o-Terphenyl	84-15-1	122	%	70-135	04.21.2020 22:20	



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS01**
Lab Sample Id: 659414-001

Matrix: Soil
Date Collected: 04.21.2020 13:21

Date Received: 04.21.2020 16:00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.21.2020 18:11

Basis: Wet Weight

Seq Number: 3123699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	4.48	0.400	mg/kg	04.22.2020 18:55		200
Toluene	108-88-3	54.7	0.400	mg/kg	04.22.2020 18:55		200
Ethylbenzene	100-41-4	35.9	0.400	mg/kg	04.22.2020 18:55		200
m,p-Xylenes	179601-23-1	45.6	0.800	mg/kg	04.22.2020 18:55		200
o-Xylene	95-47-6	20.5	0.400	mg/kg	04.22.2020 18:55		200
Total Xylenes	1330-20-7	66.1	0.400	mg/kg	04.22.2020 18:55		200
Total BTEX		161	0.400	mg/kg	04.22.2020 18:55		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.22.2020 18:55		
4-Bromofluorobenzene	460-00-4	93	%	70-130	04.22.2020 18:55		



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS02** Matrix: Soil Date Received: 04.21.2020 16:00
 Lab Sample Id: 659414-002 Date Collected: 04.21.2020 13:24 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.21.2020 17:21 Basis: Wet Weight
 Seq Number: 3123703

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4010	199	mg/kg	04.21.2020 22:26		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.21.2020 17:30 Basis: Wet Weight
 Seq Number: 3123744

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3020	249	mg/kg	04.21.2020 22:41		5
Diesel Range Organics (DRO)	C10C28DRO	10400	249	mg/kg	04.21.2020 22:41		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	904	249	mg/kg	04.21.2020 22:41		5
Total GRO-DRO	PHC628	13400	249	mg/kg	04.21.2020 22:41		5
Total TPH	PHC635	14300	249	mg/kg	04.21.2020 22:41		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	142	%	70-135	04.21.2020 22:41	**
o-Terphenyl	84-15-1	115	%	70-135	04.21.2020 22:41	



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: SS02
Lab Sample Id: 659414-002

Matrix: Soil
Date Collected: 04.21.2020 13:24

Date Received: 04.21.2020 16:00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.21.2020 18:11

Basis: Wet Weight

Seq Number: 3123699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	5.71	0.399	mg/kg	04.22.2020 19:16		200
Toluene	108-88-3	40.0	0.399	mg/kg	04.22.2020 19:16		200
Ethylbenzene	100-41-4	22.0	0.399	mg/kg	04.22.2020 19:16		200
m,p-Xylenes	179601-23-1	57.9	0.798	mg/kg	04.22.2020 19:16		200
o-Xylene	95-47-6	29.1	0.399	mg/kg	04.22.2020 19:16		200
Total Xylenes	1330-20-7	87.0	0.399	mg/kg	04.22.2020 19:16		200
Total BTEX		155	0.399	mg/kg	04.22.2020 19:16		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	04.22.2020 19:16		
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.22.2020 19:16		



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS03** Matrix: Soil Date Received: 04.21.2020 16:00
 Lab Sample Id: 659414-003 Date Collected: 04.21.2020 13:29 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.22.2020 07:30 Basis: Wet Weight
 Seq Number: 3123809

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9670	199	mg/kg	04.22.2020 08:16		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.21.2020 17:30 Basis: Wet Weight
 Seq Number: 3123744

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2640	249	mg/kg	04.21.2020 23:01		5
Diesel Range Organics (DRO)	C10C28DRO	22000	249	mg/kg	04.21.2020 23:01		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2300	249	mg/kg	04.21.2020 23:01		5
Total GRO-DRO	PHC628	24600	249	mg/kg	04.21.2020 23:01		5
Total TPH	PHC635	26900	249	mg/kg	04.21.2020 23:01		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	04.21.2020 23:01	
o-Terphenyl	84-15-1	104	%	70-135	04.21.2020 23:01	



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: SS03
Lab Sample Id: 659414-003

Matrix: Soil
Date Collected: 04.21.2020 13:29

Date Received: 04.21.2020 16:00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.21.2020 18:11

Basis: Wet Weight

Seq Number: 3123699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	11.1	0.400	mg/kg	04.22.2020 19:36		200
Toluene	108-88-3	67.2	0.400	mg/kg	04.22.2020 19:36		200
Ethylbenzene	100-41-4	42.0	0.400	mg/kg	04.22.2020 19:36		200
m,p-Xylenes	179601-23-1	57.6	0.800	mg/kg	04.22.2020 19:36		200
o-Xylene	95-47-6	28.7	0.400	mg/kg	04.22.2020 19:36		200
Total Xylenes	1330-20-7	86.3	0.400	mg/kg	04.22.2020 19:36		200
Total BTEX		207	0.400	mg/kg	04.22.2020 19:36		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.22.2020 19:36		
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.22.2020 19:36		



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS04** Matrix: Soil Date Received: 04.21.2020 16:00
 Lab Sample Id: 659414-004 Date Collected: 04.21.2020 13:32 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 04.22.2020 07:30 Basis: Wet Weight
 Seq Number: 3123809

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4990	200	mg/kg	04.22.2020 08:43		20

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 04.21.2020 17:30 Basis: Wet Weight
 Seq Number: 3123744

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3930	498	mg/kg	04.22.2020 09:43		10
Diesel Range Organics (DRO)	C10C28DRO	37200	498	mg/kg	04.22.2020 09:43		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	3990	498	mg/kg	04.22.2020 09:43		10
Total GRO-DRO	PHC628	41100	498	mg/kg	04.22.2020 09:43		10
Total TPH	PHC635	45100	498	mg/kg	04.22.2020 09:43		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	04.22.2020 09:43	
o-Terphenyl	84-15-1	106	%	70-135	04.22.2020 09:43	



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS04**
Lab Sample Id: 659414-004

Matrix: Soil
Date Collected: 04.21.2020 13:32

Date Received: 04.21.2020 16:00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.21.2020 18:11

Basis: Wet Weight

Seq Number: 3123699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	3.93	0.400	mg/kg	04.22.2020 20:58		200
Toluene	108-88-3	57.4	0.400	mg/kg	04.22.2020 20:58		200
Ethylbenzene	100-41-4	44.2	0.400	mg/kg	04.22.2020 20:58		200
m,p-Xylenes	179601-23-1	58.7	0.800	mg/kg	04.22.2020 20:58		200
o-Xylene	95-47-6	28.4	0.400	mg/kg	04.22.2020 20:58		200
Total Xylenes	1330-20-7	87.1	0.400	mg/kg	04.22.2020 20:58		200
Total BTEX		193	0.400	mg/kg	04.22.2020 20:58		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.22.2020 20:58		
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.22.2020 20:58		



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **SS05** Matrix: **Soil** Date Received: 04.21.2020 16:00
 Lab Sample Id: 659414-005 Date Collected: 04.21.2020 13:38 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: **MAB** % Moisture:
 Analyst: **MAB** Date Prep: 04.22.2020 07:30 Basis: **Wet Weight**
 Seq Number: 3123809

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.7	9.98	mg/kg	04.22.2020 08:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: **DTH** % Moisture:
 Analyst: **DTH** Date Prep: 04.21.2020 17:30 Basis: **Wet Weight**
 Seq Number: 3123744

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3310	250	mg/kg	04.21.2020 23:41		5
Diesel Range Organics (DRO)	C10C28DRO	22200	250	mg/kg	04.21.2020 23:41		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	2200	250	mg/kg	04.21.2020 23:41		5
Total GRO-DRO	PHC628	25500	250	mg/kg	04.21.2020 23:41		5
Total TPH	PHC635	27700	250	mg/kg	04.21.2020 23:41		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.21.2020 23:41	
o-Terphenyl	84-15-1	122	%	70-135	04.21.2020 23:41	



Certificate of Analytical Results 659414

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: SS05
Lab Sample Id: 659414-005

Matrix: Soil
Date Collected: 04.21.2020 13:38

Date Received: 04.21.2020 16:00
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 04.21.2020 18:11

Basis: Wet Weight

Seq Number: 3123699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.206	0.0998	mg/kg	04.22.2020 12:27		200
Toluene	108-88-3	41.1	0.399	mg/kg	04.22.2020 12:27		200
Ethylbenzene	100-41-4	68.1	0.399	mg/kg	04.22.2020 12:27		200
m,p-Xylenes	179601-23-1	96.9	0.798	mg/kg	04.22.2020 12:27		200
o-Xylene	95-47-6	47.6	0.399	mg/kg	04.22.2020 12:27		200
Total Xylenes	1330-20-7	145	0.399	mg/kg	04.22.2020 12:27		200
Total BTEX		254	0.0998	mg/kg	04.22.2020 12:27		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	127	%	70-130	04.22.2020 12:27		
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.22.2020 12:27		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
Hackberry 34 CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3123703

MB Sample Id: 7701741-1-BLK

Matrix: Solid

LCS Sample Id: 7701741-1-BKS

Prep Method: E300P

Date Prep: 04.21.2020

LCSD Sample Id: 7701741-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	255	102	255	102	90-110	0	20	mg/kg	04.21.2020 19:42	

Analytical Method: Chloride by EPA 300

Seq Number: 3123809

MB Sample Id: 7701742-1-BLK

Matrix: Solid

LCS Sample Id: 7701742-1-BKS

Prep Method: E300P

Date Prep: 04.22.2020

LCSD Sample Id: 7701742-1-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	254	102	90-110	1	20	mg/kg	04.22.2020 08:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3123703

Parent Sample Id: 659422-001

Matrix: Soil

MS Sample Id: 659422-001 S

Prep Method: E300P

Date Prep: 04.21.2020

MSD Sample Id: 659422-001 SD

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

Analytical Method: Chloride by EPA 300

Seq Number: 3123703

Parent Sample Id: 659426-002

Matrix: Soil

MS Sample Id: 659426-002 S

Prep Method: E300P

Date Prep: 04.21.2020

MSD Sample Id: 659426-002 SD

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

Analytical Method: Chloride by EPA 300

Seq Number: 3123809

Parent Sample Id: 659414-003

Matrix: Soil

MS Sample Id: 659414-003 S

Prep Method: E300P

Date Prep: 04.22.2020

MSD Sample Id: 659414-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9670	200	9860	95	9860	95	90-110	0	20	mg/kg	04.22.2020 08:22	

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.
Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123744

MB Sample Id: 7701768-1-BLK

Matrix: Solid

LCS Sample Id: 7701768-1-BKS

Prep Method: SW8015P

Date Prep: 04.21.2020

LCSD Sample Id: 7701768-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	853	85	862	86	70-135	1	35	mg/kg	04.21.2020 14:57	
Diesel Range Organics (DRO)	<50.0	1000	953	95	964	96	70-135	1	35	mg/kg	04.21.2020 14:57	

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

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123744

Matrix: Solid

MB Sample Id: 7701768-1-BLK

Prep Method: SW8015P

Date Prep: 04.21.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.21.2020 14:36	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3123744

Matrix: Soil

Parent Sample Id: 659295-002

MS Sample Id: 659295-002 S

Prep Method: SW8015P

Date Prep: 04.21.2020

MSD Sample Id: 659295-002 SD

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

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

Analytical Method: BTEX by EPA 8021B

Seq Number: 3123699

Matrix: Solid

MB Sample Id: 7701737-1-BLK

LCS Sample Id: 7701737-1-BKS

Prep Method: SW5035A

Date Prep: 04.21.2020

LCSD Sample Id: 7701737-1-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	0.105	105	0.104	104	70-130	1	35	mg/kg	04.22.2020 03:02	
Toluene	<0.00200	0.100	0.0983	98	0.0980	98	70-130	0	35	mg/kg	04.22.2020 03:02	
Ethylbenzene	<0.00200	0.100	0.0921	92	0.0904	90	71-129	2	35	mg/kg	04.22.2020 03:02	
m,p-Xylenes	<0.00400	0.200	0.187	94	0.185	93	70-135	1	35	mg/kg	04.22.2020 03:02	
o-Xylene	<0.00200	0.100	0.0960	96	0.0951	95	71-133	1	35	mg/kg	04.22.2020 03:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		105		104		70-130	%	04.22.2020 03:02
4-Bromofluorobenzene	94		91		92		70-130	%	04.22.2020 03:02

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.
Hackberry 34 CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3123699

Parent Sample Id: 659422-005

Matrix: Soil

MS Sample Id: 659422-005 S

Prep Method: SW5035A

Date Prep: 04.21.2020

MSD Sample Id: 659422-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0832	82	0.0898	89	70-130	8	35	mg/kg	04.22.2020 03:43	
Toluene	<0.00201	0.101	0.0748	74	0.0775	77	70-130	4	35	mg/kg	04.22.2020 03:43	
Ethylbenzene	<0.00201	0.101	0.0738	73	0.0795	79	71-129	7	35	mg/kg	04.22.2020 03:43	
m,p-Xylenes	<0.00402	0.201	0.148	74	0.159	79	70-135	7	35	mg/kg	04.22.2020 03:43	
o-Xylene	<0.00201	0.101	0.0774	77	0.0858	85	71-133	10	35	mg/kg	04.22.2020 03:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		104		70-130	%	04.22.2020 03:43
4-Bromofluorobenzene	95		91		70-130	%	04.22.2020 03:43

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



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

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Page 1 of 1

Chain of Custody

Work Order No: 10594114

to 59344-214420
10594114/214420

Project Manager:	Kalei Jennings	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	kjennings@ltenv.com tcasey@ltenv.com ab

ANALYSIS REQUEST

Work Order Notes

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

Project Name:	Hackberry 34 CTB	Turn Around	☒
Project Number:	012920063	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Travis Casey	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	1.0			Thermometer ID	TNM007	
Received Intact:	Yes	No		Correction Factor:	-0.2	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	5	
Sample Custody Seals:	Yes	No	N/A			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E	BTEX	Chlori	Sample Comments									
SS01	S	4-21-20	1321	0.5'	1	X	X	X										
SS02			1324		1	X	X	X										
SS03			1329		1	X	X	X										
SS04			1332		1	X	X	X										
SS05			1338		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 \$8 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4/21/20 16:00			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.21.2020 04.00.00 PM

Work Order #: 659414

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist

Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Elizabeth McClellan

Date: 04.21.2020

Checklist reviewed by:



Jessica Kramer

Date: 04.23.2020



Certificate of Analysis Summary 663572

LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Fri 06.05.2020 10:58
Report Date: 06.09.2020 13:29
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	663572-001	663572-002	663572-003	663572-004	663572-005	663572-006
	<i>Field Id:</i>	BH01	BH01A	BH02	BH02A	BH03	BH03A
	<i>Depth:</i>	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	06.04.2020 12:40	06.04.2020 13:10	06.04.2020 14:05	06.04.2020 14:30	06.04.2020 15:30	06.04.2020 15:50
BTEX by EPA 8021B	<i>Extracted:</i>	06.05.2020 15:00	06.05.2020 15:00	06.05.2020 15:00	06.05.2020 15:00	06.05.2020 15:00	06.05.2020 15:00
	<i>Analyzed:</i>	06.05.2020 20:25	06.08.2020 11:59	06.05.2020 21:06	06.08.2020 12:20	06.05.2020 21:47	06.08.2020 11:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.251 0.251	<0.0204 0.0204	<0.250 0.250	<0.0196 0.0196	<0.253 0.253	<0.00202 0.00202
Toluene		11.5 1.00	<0.0204 0.0204	16.1 0.998	<0.0196 0.0196	<0.253 0.253	<0.00202 0.00202
Ethylbenzene		25.0 1.00	<0.0204 0.0204	24.8 0.998	0.221 0.0196	<0.253 0.253	<0.00202 0.00202
m,p-Xylenes		29.9 2.00	<0.0408 0.0408	70.4 2.00	0.195 0.0392	4.90 2.02	<0.00405 0.00405
o-Xylene		21.2 1.00	<0.0204 0.0204	45.9 0.998	0.214 0.0196	11.8 1.01	<0.00202 0.00202
Total Xylenes		51.1 1.00	<0.0204 0.0204	116 0.998	0.409 0.0196	16.7 1.01	<0.00202 0.00202
Total BTEX		87.6 0.251	<0.0204 0.0204	157 0.250	0.630 0.0196	16.7 0.253	<0.00202 0.00202
TPH by SW8015 Mod	<i>Extracted:</i>	06.05.2020 17:30	06.05.2020 17:30	06.05.2020 17:30	06.05.2020 17:30	06.05.2020 17:30	06.05.2020 17:30
	<i>Analyzed:</i>	06.05.2020 21:46	06.08.2020 10:04	06.05.2020 22:07	06.08.2020 10:25	06.05.2020 22:27	06.05.2020 20:44
	<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)		1470 250	<50.1 50.1	2940 251	<50.1 50.1	1040 250	<50.1 50.1
Diesel Range Organics (DRO)		9500 250	251 50.1	15300 251	617 50.1	7810 250	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		928 250	<50.1 50.1	1450 251	68.7 50.1	781 250	<50.1 50.1
Total GRO-DRO		11000 250	251 50.1	18200 251	617 50.1	8850 250	<50.1 50.1
Total TPH		11900 250	251 50.1	19700 251	686 50.1	9630 250	<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



Analytical Report 663572

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

BEU Hackberry 34 CTB

012920063

06.09.2020

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



06.09.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **663572**

BEU Hackberry 34 CTB

Project Address: Rural Eddy County

Joseph Hernandez:

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) 663572. 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. 663572 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

A Small Business and Minority Company

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



Sample Cross Reference 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	06.04.2020 12:40	0.2 - 0.5 ft	663572-001
BH01A	S	06.04.2020 13:10	2 - 2.5 ft	663572-002
BH02	S	06.04.2020 14:05	0.2 - 0.5 ft	663572-003
BH02A	S	06.04.2020 14:30	2 - 2.5 ft	663572-004
BH03	S	06.04.2020 15:30	0.2 - 0.5 ft	663572-005
BH03A	S	06.04.2020 15:50	2 - 2.5 ft	663572-006



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *BEU Hackberry 34 CTB*

Project ID: 012920063
Work Order Number(s): 663572

Report Date: 06.09.2020
Date Received: 06.05.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH01**
Lab Sample Id: 663572-001

Matrix: Soil
Date Collected: 06.04.2020 12:40

Date Received: 06.05.2020 10:58
Sample Depth: 0.2 - 0.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Date Prep: 06.05.2020 17:30

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1470	250	mg/kg	06.05.2020 21:46		5
Diesel Range Organics (DRO)	C10C28DRO	9500	250	mg/kg	06.05.2020 21:46		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	928	250	mg/kg	06.05.2020 21:46		5
Total GRO-DRO	PHC628	11000	250	mg/kg	06.05.2020 21:46		5
Total TPH	PHC635	11900	250	mg/kg	06.05.2020 21:46		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.05.2020 21:46	
o-Terphenyl	84-15-1	108	%	70-135	06.05.2020 21:46	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Date Prep: 06.05.2020 15:00

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.251	0.251	mg/kg	06.05.2020 20:25	U	500
Toluene	108-88-3	11.5	1.00	mg/kg	06.05.2020 20:25		500
Ethylbenzene	100-41-4	25.0	1.00	mg/kg	06.05.2020 20:25		500
m,p-Xylenes	179601-23-1	29.9	2.00	mg/kg	06.05.2020 20:25		500
o-Xylene	95-47-6	21.2	1.00	mg/kg	06.05.2020 20:25		500
Total Xylenes	1330-20-7	51.1	1.00	mg/kg	06.05.2020 20:25		500
Total BTEX		87.6	0.251	mg/kg	06.05.2020 20:25		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	06.05.2020 20:25	
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.05.2020 20:25	



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH01A**
Lab Sample Id: 663572-002

Matrix: Soil
Date Collected: 06.04.2020 13:10

Date Received: 06.05.2020 10:58
Sample Depth: 2 - 2.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Prep Method: SW8015P

% Moisture:

Date Prep: 06.05.2020 17:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.08.2020 10:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	251	50.1	mg/kg	06.08.2020 10:04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.08.2020 10:04	U	1
Total GRO-DRO	PHC628	251	50.1	mg/kg	06.08.2020 10:04		1
Total TPH	PHC635	251	50.1	mg/kg	06.08.2020 10:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.08.2020 10:04	
o-Terphenyl	84-15-1	73	%	70-135	06.08.2020 10:04	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Prep Method: SW5035A

% Moisture:

Date Prep: 06.05.2020 15:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.08.2020 11:59	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.08.2020 11:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.08.2020 11:59	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.08.2020 11:59	



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH02**
Lab Sample Id: 663572-003

Matrix: Soil
Date Collected: 06.04.2020 14:05

Date Received: 06.05.2020 10:58
Sample Depth: 0.2 - 0.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Prep Method: SW8015P

% Moisture:

Date Prep: 06.05.2020 17:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2940	251	mg/kg	06.05.2020 22:07		5
Diesel Range Organics (DRO)	C10C28DRO	15300	251	mg/kg	06.05.2020 22:07		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1450	251	mg/kg	06.05.2020 22:07		5
Total GRO-DRO	PHC628	18200	251	mg/kg	06.05.2020 22:07		5
Total TPH	PHC635	19700	251	mg/kg	06.05.2020 22:07		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	06.05.2020 22:07	
o-Terphenyl	84-15-1	81	%	70-135	06.05.2020 22:07	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Prep Method: SW5035A

% Moisture:

Date Prep: 06.05.2020 15:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.250	0.250	mg/kg	06.05.2020 21:06	U	500
Toluene	108-88-3	16.1	0.998	mg/kg	06.05.2020 21:06		500
Ethylbenzene	100-41-4	24.8	0.998	mg/kg	06.05.2020 21:06		500
m,p-Xylenes	179601-23-1	70.4	2.00	mg/kg	06.05.2020 21:06		500
o-Xylene	95-47-6	45.9	0.998	mg/kg	06.05.2020 21:06		500
Total Xylenes	1330-20-7	116	0.998	mg/kg	06.05.2020 21:06		500
Total BTEX		157	0.250	mg/kg	06.05.2020 21:06		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.05.2020 21:06	
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.05.2020 21:06	



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH02A**
Lab Sample Id: 663572-004

Matrix: Soil
Date Collected: 06.04.2020 14:30

Date Received: 06.05.2020 10:58
Sample Depth: 2 - 2.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Date Prep: 06.05.2020 17:30

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	06.08.2020 10:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	617	50.1	mg/kg	06.08.2020 10:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	68.7	50.1	mg/kg	06.08.2020 10:25		1
Total GRO-DRO	PHC628	617	50.1	mg/kg	06.08.2020 10:25		1
Total TPH	PHC635	686	50.1	mg/kg	06.08.2020 10:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.08.2020 10:25	
o-Terphenyl	84-15-1	80	%	70-135	06.08.2020 10:25	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Date Prep: 06.05.2020 15:00

Prep Method: SW5035A

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	06.08.2020 12:20	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	06.08.2020 12:20	U	1
Ethylbenzene	100-41-4	0.221	0.0196	mg/kg	06.08.2020 12:20		1
m,p-Xylenes	179601-23-1	0.195	0.0392	mg/kg	06.08.2020 12:20		1
o-Xylene	95-47-6	0.214	0.0196	mg/kg	06.08.2020 12:20		1
Total Xylenes	1330-20-7	0.409	0.0196	mg/kg	06.08.2020 12:20		1
Total BTEX		0.630	0.0196	mg/kg	06.08.2020 12:20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	06.08.2020 12:20	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.08.2020 12:20	



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH03**
Lab Sample Id: 663572-005

Matrix: Soil
Date Collected: 06.04.2020 15:30

Date Received: 06.05.2020 10:58
Sample Depth: 0.2 - 0.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Prep Method: SW8015P

% Moisture:

Date Prep: 06.05.2020 17:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1040	250	mg/kg	06.05.2020 22:27		5
Diesel Range Organics (DRO)	C10C28DRO	7810	250	mg/kg	06.05.2020 22:27		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	781	250	mg/kg	06.05.2020 22:27		5
Total GRO-DRO	PHC628	8850	250	mg/kg	06.05.2020 22:27		5
Total TPH	PHC635	9630	250	mg/kg	06.05.2020 22:27		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.05.2020 22:27	
o-Terphenyl	84-15-1	87	%	70-135	06.05.2020 22:27	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Prep Method: SW5035A

% Moisture:

Date Prep: 06.05.2020 15:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.253	0.253	mg/kg	06.05.2020 21:47	U	500
Toluene	108-88-3	<0.253	0.253	mg/kg	06.05.2020 21:47	U	500
Ethylbenzene	100-41-4	<0.253	0.253	mg/kg	06.05.2020 21:47	U	500
m,p-Xylenes	179601-23-1	4.90	2.02	mg/kg	06.05.2020 21:47		500
o-Xylene	95-47-6	11.8	1.01	mg/kg	06.05.2020 21:47		500
Total Xylenes	1330-20-7	16.7	1.01	mg/kg	06.05.2020 21:47		500
Total BTEX		16.7	0.253	mg/kg	06.05.2020 21:47		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.05.2020 21:47	
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.05.2020 21:47	



Certificate of Analytical Results 663572

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH03A**
Lab Sample Id: 663572-006

Matrix: Soil
Date Collected: 06.04.2020 15:50

Date Received: 06.05.2020 10:58
Sample Depth: 2 - 2.5 ft

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3128174

Prep Method: SW8015P

% Moisture:

Date Prep: 06.05.2020 17:30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	06.05.2020 20:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	06.05.2020 20:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	06.05.2020 20:44	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	06.05.2020 20:44	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	06.05.2020 20:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	06.05.2020 20:44	
o-Terphenyl	84-15-1	79	%	70-135	06.05.2020 20:44	

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3128164

Prep Method: SW5035A

% Moisture:

Date Prep: 06.05.2020 15:00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1
m,p-Xylenes	179601-23-1	<0.00405	0.00405	mg/kg	06.08.2020 11:39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.08.2020 11:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.08.2020 11:39	
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.08.2020 11:39	



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
BEU Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128174

MB Sample Id: 7704912-1-BLK

Matrix: Solid

LCS Sample Id: 7704912-1-BKS

Prep Method: SW8015P

Date Prep: 06.05.2020

LCSD Sample Id: 7704912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	959	96	973	97	70-135	1	35	mg/kg	06.05.2020 17:59	
Diesel Range Organics (DRO)	<50.0	1000	987	99	1010	101	70-135	2	35	mg/kg	06.05.2020 17:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	88		95		102		70-135	%	06.05.2020 17:59
o-Terphenyl	84		84		90		70-135	%	06.05.2020 17:59

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128174

Matrix: Solid

MB Sample Id: 7704912-1-BLK

Prep Method: SW8015P

Date Prep: 06.05.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	06.05.2020 17:38	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3128174

Matrix: Soil

Parent Sample Id: 663628-001

MS Sample Id: 663628-001 S

Prep Method: SW8015P

Date Prep: 06.05.2020

MSD Sample Id: 663628-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	998	1200	120	1210	121	70-135	1	35	mg/kg	06.05.2020 19:01	
Diesel Range Organics (DRO)	<49.9	998	1150	115	1150	115	70-135	0	35	mg/kg	06.05.2020 19:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		101		70-135	%	06.05.2020 19:01
o-Terphenyl	88		87		70-135	%	06.05.2020 19:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3128164

Matrix: Solid

MB Sample Id: 7704901-1-BLK

LCS Sample Id: 7704901-1-BKS

Prep Method: SW5035A

Date Prep: 06.05.2020

LCSD Sample Id: 7704901-1-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	0.111	111	0.109	109	70-130	2	35	mg/kg	06.05.2020 17:01	
Toluene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	06.05.2020 17:01	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0987	99	71-129	2	35	mg/kg	06.05.2020 17:01	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.204	102	70-135	2	35	mg/kg	06.05.2020 17:01	
o-Xylene	<0.00200	0.100	0.105	105	0.103	103	71-133	2	35	mg/kg	06.05.2020 17:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		109		107		70-130	%	06.05.2020 17:01
4-Bromofluorobenzene	96		94		95		70-130	%	06.05.2020 17:01

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.

BEU Hackberry 34 CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3128164

Parent Sample Id: 663628-001

Matrix: Soil

MS Sample Id: 663628-001 S

Prep Method: SW5035A

Date Prep: 06.05.2020

MSD Sample Id: 663628-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.116	115	0.103	102	70-130	12	35	mg/kg	06.05.2020 17:42	
Toluene	<0.00201	0.101	0.111	110	0.0982	97	70-130	12	35	mg/kg	06.05.2020 17:42	
Ethylbenzene	<0.00201	0.101	0.102	101	0.0927	92	71-129	10	35	mg/kg	06.05.2020 17:42	
m,p-Xylenes	<0.00402	0.201	0.212	105	0.189	94	70-135	11	35	mg/kg	06.05.2020 17:42	
o-Xylene	<0.00201	0.101	0.106	105	0.0957	95	71-133	10	35	mg/kg	06.05.2020 17:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		106		70-130	%	06.05.2020 17:42
4-Bromofluorobenzene	94		93		70-130	%	06.05.2020 17:42

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: LEU3572

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 Crasbad, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 699-6701

www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432-894-5641	Email:	jhernandez@ltenv.com dabyers@ltenv.com

Project Name:	BEV Hackberry 34 TB	Turn Around	☒
Project Number:	012920063	Routine	☒
Project Location:	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	NRM2010853197	Quote #:	

SAMPLE RECEIPT		Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
Temperature (°C):	14	Thermometer ID			
Received Intact:	☒ Yes ☐ No	Correction Factor:	T-NM-007		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	~0.2		
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST	Preservative Codes
BH01		S	6/4/20	1240	6.2-0.5'	1	X	TPH (EPA 8015)	MeOH: Me
BH01A		S		1310	2-2.5'	1	X	BTEX (EPA 8021)	None: NO
BH02		S		1405	0.2-0.5'	1	X		HNO3: HN
BH02A		S		1430	2-2.5'	1	X		H2SO4: H2
BH03		S		1530	0.2-0.5'	2	X		HCL: HL
BH03A		S		1550	2-2.5'	2	X		NaOH: Na
									Zn Acetate+ NaOH: Zn
									TAT starts the day received by the lab, if received by 4:00pm
									Sample Comments

Total 200.7 / 6010 200.8 / 6020:

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

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 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
Anna Byers	[Signature]	6/5/2020 10:58			

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06.05.2020 10.58.00 AM

Work Order #: 663572

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)?	1.4
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

* 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: 06.05.2020

Checklist reviewed by:



Jessica Kramer

Date: 06.08.2020

Certificate of Analysis Summary 667017



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50
Report Date: 07.23.2020 13:21
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667017-001	667017-002				
	Field Id:	BH04	BH04A				
	Depth:	0.2-0.5 ft	2-2.5 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	07.09.2020 11:25	07.09.2020 11:35				
BTEX by EPA 8021B	Extracted:	07.13.2020 14:30	07.13.2020 14:30				
	Analyzed:	07.13.2020 18:22	07.13.2020 18:01				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00200 0.00200	<0.0101 0.0101				
Benzene							
Toluene							
Ethylbenzene							
m,p-Xylenes							
o-Xylene							
Total Xylenes							
Total BTEX							
Chloride by EPA 300	Extracted:	07.13.2020 15:40	07.13.2020 15:40				
	Analyzed:	07.13.2020 16:15	07.13.2020 16:32				
	Units/RL:	mg/kg RL	mg/kg RL				
		3480 DX 50.3	16.9 10.0				
Chloride							
TPH by SW8015 Mod	Extracted:	07.13.2020 13:30	07.13.2020 13:30				
	Analyzed:	07.13.2020 16:28	07.13.2020 15:27				
	Units/RL:	mg/kg RL	mg/kg RL				
		<499 499	<50.2 50.2				
Gasoline Range Hydrocarbons (GRO)							
Diesel Range Organics (DRO)							
Motor Oil Range Hydrocarbons (MRO)							
Total GRO-DRO							
Total TPH							

BRL - Below Reporting Limit

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



Environment Testing
Xenco

Analytical Report 667017

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

BEU Hackberry 34 CTB

012920063

07.23.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.23.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667017**

BEU Hackberry 34 CTB

Project Address: Rural Eddy County

Joseph Hernandez:

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 Eurofins Xenco, LLC Report Number(s) 667017. 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 Eurofins Xenco, LLC. 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. 667017 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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



Sample Cross Reference 667017

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH04	S	07.09.2020 11:25	0.2 - 0.5 ft	667017-001
BH04A	S	07.09.2020 11:35	2 - 2.5 ft	667017-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU Hackberry 34 CTB

Project ID: 012920063
Work Order Number(s): 667017

Report Date: 07.23.2020
Date Received: 07.13.2020

Sample receipt non conformances and comments:

V1.001 Revision - Chloride re run sample 001 reported on new version

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3131513 Chloride by EPA 300

Lab Sample ID 667017-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 667017-001, -002.

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



Certificate of Analytical Results 667017

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH04** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667017-001 Date Collected: 07.09.2020 11:25 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3480	50.3	mg/kg	07.21.2020 17:02	DX	5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 13:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<499	499	mg/kg	07.13.2020 16:28	U	10
Diesel Range Organics (DRO)	C10C28DRO	9240	499	mg/kg	07.13.2020 16:28		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1210	499	mg/kg	07.13.2020 16:28		10
Total GRO-DRO	PHC628	9240	499	mg/kg	07.13.2020 16:28		10
Total TPH	PHC635	10500	499	mg/kg	07.13.2020 16:28		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	07.13.2020 16:28	
o-Terphenyl	84-15-1	111	%	70-135	07.13.2020 16:28	



Certificate of Analytical Results 667017

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH04**
Lab Sample Id: 667017-001

Matrix: Soil
Date Collected: 07.09.2020 11:25

Date Received: 07.13.2020 12:50
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.13.2020 18:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.2020 18:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.13.2020 18:22		
4-Bromofluorobenzene	460-00-4	93	%	70-130	07.13.2020 18:22		



Certificate of Analytical Results 667017

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH04A** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667017-002 Date Collected: 07.09.2020 11:35 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.9	10.0	mg/kg	07.13.2020 16:32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 13:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.13.2020 15:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.13.2020 15:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.13.2020 15:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.13.2020 15:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.13.2020 15:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	07.13.2020 15:27	
o-Terphenyl	84-15-1	92	%	70-135	07.13.2020 15:27	



Certificate of Analytical Results 667017

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH04A**
Lab Sample Id: 667017-002

Matrix: Soil
Date Collected: 07.09.2020 11:35

Date Received: 07.13.2020 12:50
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
Toluene	108-88-3	<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
Ethylbenzene	100-41-4	<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
m,p-Xylenes	179601-23-1	<0.0202	0.0202	mg/kg	07.13.2020 18:01	U	1
o-Xylene	95-47-6	<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
Total Xylenes	1330-20-7	<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
Total BTEX		<0.0101	0.0101	mg/kg	07.13.2020 18:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.13.2020 18:01		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.13.2020 18:01		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
BEU Hackberry 34 CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

MB Sample Id: 7707247-1-BLK

Matrix: Solid

LCS Sample Id: 7707247-1-BKS

Prep Method: E300P

Date Prep: 07.13.2020

LCSD Sample Id: 7707247-1-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	245	98	256	102	90-110	4	20	mg/kg	07.13.2020 16:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

Parent Sample Id: 667017-001

Matrix: Soil

MS Sample Id: 667017-001 S

Prep Method: E300P

Date Prep: 07.13.2020

MSD Sample Id: 667017-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3480	200	3750	135	3760	140	90-110	0	20	mg/kg	07.13.2020 16:21	X

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

Parent Sample Id: 667021-009

Matrix: Soil

MS Sample Id: 667021-009 S

Prep Method: E300P

Date Prep: 07.13.2020

MSD Sample Id: 667021-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.3	200	217	99	217	99	90-110	0	20	mg/kg	07.13.2020 17:39	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

MB Sample Id: 7707282-1-BLK

Matrix: Solid

LCS Sample Id: 7707282-1-BKS

Prep Method: SW8015P

Date Prep: 07.13.2020

LCSD Sample Id: 7707282-1-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	1230	123	1090	109	70-135	12	35	mg/kg	07.14.2020 10:07	
Diesel Range Organics (DRO)	<50.0	1000	1220	122	1060	106	70-135	14	35	mg/kg	07.14.2020 10:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		130		117		70-135	%	07.14.2020 10:07
o-Terphenyl	80		116		103		70-135	%	07.14.2020 10:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Matrix: Solid

MB Sample Id: 7707282-1-BLK

Prep Method: SW8015P

Date Prep: 07.13.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.13.2020 14:26	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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.
BEU Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Parent Sample Id: 667017-002

Matrix: Soil

MS Sample Id: 667017-002 S

Prep Method: SW8015P

Date Prep: 07.13.2020

MSD Sample Id: 667017-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1230	123	1070	107	70-135	14	35	mg/kg	07.13.2020 15:47	
Diesel Range Organics (DRO)	<50.2	1000	1200	120	1060	106	70-135	12	35	mg/kg	07.13.2020 15:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		100		70-135	%	07.13.2020 15:47
o-Terphenyl	85		75		70-135	%	07.13.2020 15:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131532

MB Sample Id: 7707250-1-BLK

Matrix: Solid

LCS Sample Id: 7707250-1-BKS

Prep Method: SW5035A

Date Prep: 07.13.2020

LCSD Sample Id: 7707250-1-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	0.0972	97	0.0955	96	70-130	2	35	mg/kg	07.13.2020 16:05	
Toluene	<0.00200	0.100	0.0947	95	0.0925	93	70-130	2	35	mg/kg	07.13.2020 16:05	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0978	98	71-129	4	35	mg/kg	07.13.2020 16:05	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.200	100	70-135	3	35	mg/kg	07.13.2020 16:05	
o-Xylene	<0.00200	0.100	0.102	102	0.0993	99	71-133	3	35	mg/kg	07.13.2020 16:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		98		70-130	%	07.13.2020 16:05
4-Bromofluorobenzene	102		100		97		70-130	%	07.13.2020 16:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131532

Parent Sample Id: 667017-002

Matrix: Soil

MS Sample Id: 667017-002 S

Prep Method: SW5035A

Date Prep: 07.13.2020

MSD Sample Id: 667017-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0101	0.505	0.526	104	0.461	91	70-130	13	35	mg/kg	07.13.2020 16:45	
Toluene	<0.0101	0.505	0.499	99	0.447	89	70-130	11	35	mg/kg	07.13.2020 16:45	
Ethylbenzene	<0.0101	0.505	0.517	102	0.463	92	71-129	11	35	mg/kg	07.13.2020 16:45	
m,p-Xylenes	<0.0202	1.01	1.05	104	0.927	92	70-135	12	35	mg/kg	07.13.2020 16:45	
o-Xylene	<0.0101	0.505	0.517	102	0.468	93	71-133	10	35	mg/kg	07.13.2020 16:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	07.13.2020 16:45
4-Bromofluorobenzene	101		97		70-130	%	07.13.2020 16:45

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: 1667017

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

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Page 1 of 1

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 594-5641	Email:	jhernandez@xenco.com

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

ANALYSIS REQUEST

Preservative Codes

Project Name:	BEU Hackberry 34 CRB	Turn Around	Pres. Code
Project Number:	0129200633	Routine	
Project Location:	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	N2M2010853197	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	1.0/0.2			Thermometer ID:	TMM007	
Received Intact:	Yes	No			Correction Factor:	-0.2
Cooler Custody Seals:	Yes	No			Total Containers:	2
Sample Custody Seals:	Yes	No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers
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BH04		S	7/9/20	11:25	0.2-0.5'	1
BH04A		S	7/9/20	11:35	2-2.5'	1

UB

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	MeOH: Me	None: NO	HNO3: HN	H2SO4: H2	HCL: HL	NaOH: Na	Zn Acetate+ NaOH: Zn	TAT starts the day received by the lab, if received by 4:00pm	Sample Comments	
BH04		S	7/9/20	11:25	0.2-0.5'	1										
BH04A		S	7/9/20	11:35	2-2.5'	1										

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
Anna Byers		7/13/20 12:50			

Revised Date 02/26/19 Rev. 2019.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.13.2020 12.50.00 PM

Work Order #: 667017

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)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#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

Samples received in bulk containers.

*** 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: 07.13.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.14.2020



Xenco

Certificate of Analysis Summary 667020

LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50
Report Date: 07.16.2020 14:54
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667020-001	667020-002	667020-003	667020-004	667020-005	667020-006
	<i>Field Id:</i>	BH05	BH05A	BH06	BH06A	BH07	BH07A
	<i>Depth:</i>	1-1.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.09.2020 12:45	07.09.2020 13:00	07.09.2020 13:15	07.09.2020 13:55	07.09.2020 14:18	07.09.2020 15:05
BTEX by EPA 8021B	<i>Extracted:</i>	07.15.2020 12:37	07.15.2020 12:37	07.15.2020 12:37	07.15.2020 12:37	07.15.2020 12:37	07.15.2020 12:37
	<i>Analyzed:</i>	07.15.2020 14:27	07.15.2020 14:48	07.15.2020 15:10	07.15.2020 15:31	07.15.2020 15:53	07.15.2020 16:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402	<0.00402 0.00402	<0.00403 0.00403
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02	07.15.2020 16:02
	<i>Analyzed:</i>	07.15.2020 16:45	07.15.2020 17:02	07.15.2020 17:07	07.15.2020 17:13	07.15.2020 17:19	07.15.2020 17:35
	<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	21.4 10.0	188 10.0	187 9.90	206 10.1	13.4 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	07.15.2020 11:15	07.15.2020 11:15	07.15.2020 11:15	07.15.2020 11:15	07.15.2020 11:15	07.15.2020 11:15
	<i>Analyzed:</i>	07.15.2020 11:29	07.15.2020 12:31	07.15.2020 12:51	07.15.2020 13:12	07.15.2020 13:33	07.15.2020 13:53
	<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	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.2 50.2
Diesel Range Organics (DRO)		<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.2 50.2
Total GRO-DRO		<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.2 50.2
Total TPH		<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.9 49.9	<50.1 50.1	<50.2 50.2

BRL - Below Reporting Limit

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



Xenco

Analytical Report 667020

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

BEU Hackberry 34 CTB

012920063

07.16.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.16.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667020**

BEU Hackberry 34 CTB

Project Address: Rural Eddy County

Joseph Hernandez:

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 Eurofins Xenco, LLC Report Number(s) 667020. 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 Eurofins Xenco, LLC. 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. 667020 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 667020****LT Environmental, Inc., Arvada, CO**

BEU Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH05	S	07.09.2020 12:45	1 - 1.5 ft	667020-001
BH05A	S	07.09.2020 13:00	2 - 2.5 ft	667020-002
BH06	S	07.09.2020 13:15	0.2 - 0.5 ft	667020-003
BH06A	S	07.09.2020 13:55	2 - 2.5 ft	667020-004
BH07	S	07.09.2020 14:18	0.2 - 0.5 ft	667020-005
BH07A	S	07.09.2020 15:05	2 - 2.5 ft	667020-006



Xenco

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: BEU Hackberry 34 CTB

Project ID: 012920063
Work Order Number(s): 667020

Report Date: 07.16.2020
Date Received: 07.13.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH05** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-001 Date Collected: 07.09.2020 12:45 Sample Depth: 1 - 1.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	07.15.2020 16:45	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.15.2020 11:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.15.2020 11:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.15.2020 11:29	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.15.2020 11:29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.15.2020 11:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.15.2020 11:29	
o-Terphenyl	84-15-1	100	%	70-135	07.15.2020 11:29	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH05**
Lab Sample Id: 667020-001

Matrix: Soil
Date Collected: 07.09.2020 12:45

Date Received: 07.13.2020 12:50
Sample Depth: 1 - 1.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 14:27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 14:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.15.2020 14:27		
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.15.2020 14:27		



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH05A** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-002 Date Collected: 07.09.2020 13:00 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.4	10.0	mg/kg	07.15.2020 17:02		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 12:31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 12:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 12:31	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 12:31	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 12:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.15.2020 12:31	
o-Terphenyl	84-15-1	104	%	70-135	07.15.2020 12:31	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH05A**
Lab Sample Id: 667020-002

Matrix: Soil
Date Collected: 07.09.2020 13:00

Date Received: 07.13.2020 12:50
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.15.2020 14:48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.15.2020 14:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.15.2020 14:48		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 14:48		



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH06** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-003 Date Collected: 07.09.2020 13:15 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	188	10.0	mg/kg	07.15.2020 17:07		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.15.2020 12:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.15.2020 12:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.15.2020 12:51	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.15.2020 12:51	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.15.2020 12:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	07.15.2020 12:51	
o-Terphenyl	84-15-1	104	%	70-135	07.15.2020 12:51	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH06**
Lab Sample Id: 667020-003

Matrix: Soil
Date Collected: 07.09.2020 13:15

Date Received: 07.13.2020 12:50
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 15:10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 15:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.15.2020 15:10		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.15.2020 15:10		



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH06A** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-004 Date Collected: 07.09.2020 13:55 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	187	9.90	mg/kg	07.15.2020 17:13		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.15.2020 13:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.15.2020 13:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.15.2020 13:12	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.15.2020 13:12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.15.2020 13:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.15.2020 13:12	
o-Terphenyl	84-15-1	100	%	70-135	07.15.2020 13:12	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH06A**
Lab Sample Id: 667020-004

Matrix: Soil
Date Collected: 07.09.2020 13:55

Date Received: 07.13.2020 12:50
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 15:31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 15:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 15:31		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.15.2020 15:31		



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH07** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-005 Date Collected: 07.09.2020 14:18 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	206	10.1	mg/kg	07.15.2020 17:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.15.2020 13:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.15.2020 13:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.15.2020 13:33	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.15.2020 13:33	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.15.2020 13:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.15.2020 13:33	
o-Terphenyl	84-15-1	96	%	70-135	07.15.2020 13:33	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH07**
Lab Sample Id: 667020-005

Matrix: Soil
Date Collected: 07.09.2020 14:18

Date Received: 07.13.2020 12:50
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.15.2020 15:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 15:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 15:53		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 15:53		



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH07A** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667020-006 Date Collected: 07.09.2020 15:05 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.15.2020 16:02 Basis: Wet Weight
 Seq Number: 3131770

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.4	10.1	mg/kg	07.15.2020 17:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.15.2020 11:15 Basis: Wet Weight
 Seq Number: 3131775

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.15.2020 13:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.15.2020 13:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.15.2020 13:53	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.15.2020 13:53	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.15.2020 13:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.15.2020 13:53	
o-Terphenyl	84-15-1	102	%	70-135	07.15.2020 13:53	



Certificate of Analytical Results 667020

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **BH07A**
Lab Sample Id: 667020-006

Matrix: Soil
Date Collected: 07.09.2020 15:05

Date Received: 07.13.2020 12:50
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.15.2020 12:37

Basis: Wet Weight

Seq Number: 3131767

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.15.2020 16:14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.15.2020 16:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.15.2020 16:14		
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.15.2020 16:14		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Xenco

QC Summary 667020

LT Environmental, Inc.

BEU Hackberry 34 CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

MB Sample Id: 7707423-1-BLK

Matrix: Solid

LCS Sample Id: 7707423-1-BKS

Prep Method: E300P

Date Prep: 07.15.2020

LCSD Sample Id: 7707423-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	264	106	90-110	4	20	mg/kg	07.15.2020 16:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	209	105	208	104	90-110	0	20	mg/kg	07.15.2020 16:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3131770

Parent Sample Id: 667339-001

Matrix: Soil

MS Sample Id: 667339-001 S

Prep Method: E300P

Date Prep: 07.15.2020

MSD Sample Id: 667339-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	382	200	587	103	586	103	90-110	0	20	mg/kg	07.15.2020 18:09	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

MB Sample Id: 7707420-1-BLK

Matrix: Solid

LCS Sample Id: 7707420-1-BKS

Prep Method: SW8015P

Date Prep: 07.15.2020

LCSD Sample Id: 7707420-1-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	1020	102	1010	101	70-135	1	35	mg/kg	07.15.2020 10:48	
Diesel Range Organics (DRO)	<50.0	1000	1100	110	1050	105	70-135	5	35	mg/kg	07.15.2020 10:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		109		110		70-135	%	07.15.2020 10:48
o-Terphenyl	102		105		103		70-135	%	07.15.2020 10:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Matrix: Solid

MB Sample Id: 7707420-1-BLK

Prep Method: SW8015P

Date Prep: 07.15.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.15.2020 10:27	

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



Xenco

QC Summary 667020

LT Environmental, Inc.

BEU Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131775

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: SW8015P

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 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)	<50.1	1000	871	87	880	88	70-135	1	35	mg/kg	07.15.2020 11:50	
Diesel Range Organics (DRO)	<50.1	1000	1030	103	1020	102	70-135	1	35	mg/kg	07.15.2020 11:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		113		70-135	%	07.15.2020 11:50
o-Terphenyl	112		109		70-135	%	07.15.2020 11:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

MB Sample Id: 7707425-1-BLK

Matrix: Solid

LCS Sample Id: 7707425-1-BKS

Prep Method: SW5035A

Date Prep: 07.15.2020

LCSD Sample Id: 7707425-1-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	0.111	111	0.114	114	70-130	3	35	mg/kg	07.15.2020 12:27	
Toluene	<0.00200	0.100	0.105	105	0.108	108	70-130	3	35	mg/kg	07.15.2020 12:27	
Ethylbenzene	<0.00200	0.100	0.0999	100	0.102	102	71-129	2	35	mg/kg	07.15.2020 12:27	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.207	104	70-135	2	35	mg/kg	07.15.2020 12:27	
o-Xylene	<0.00200	0.100	0.0972	97	0.101	101	71-133	4	35	mg/kg	07.15.2020 12:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		101		70-130	%	07.15.2020 12:27
4-Bromofluorobenzene	94		98		102		70-130	%	07.15.2020 12:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131767

Parent Sample Id: 667020-001

Matrix: Soil

MS Sample Id: 667020-001 S

Prep Method: SW5035A

Date Prep: 07.15.2020

MSD Sample Id: 667020-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.124	124	0.118	117	70-130	5	35	mg/kg	07.15.2020 13:10	
Toluene	<0.00201	0.100	0.117	117	0.114	113	70-130	3	35	mg/kg	07.15.2020 13:10	
Ethylbenzene	<0.00201	0.100	0.108	108	0.106	105	71-129	2	35	mg/kg	07.15.2020 13:10	
m,p-Xylenes	<0.00402	0.201	0.217	108	0.212	105	70-135	2	35	mg/kg	07.15.2020 13:10	
o-Xylene	<0.00201	0.100	0.106	106	0.104	103	71-133	2	35	mg/kg	07.15.2020 13:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.15.2020 13:10
4-Bromofluorobenzene	101		100		70-130	%	07.15.2020 13:10

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: 6617020

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 (332) 704-5440 El Paso, TX (915) 595-3443

Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Graslbad NM (432) 704 5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 861-1111

Bill Address	1010 020th Ave West Palm Beach, FL 33411-5611
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www.xenco.com Page 1 of 1

Project Manager:	Joseph Hernandez		Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental		Company Name:	XTO Energy
Address:	3300 North A Street		Address:	5104 E. Greene Street
City, State ZIP:	Midland, TX 79705		City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 894-5641	Email:	jhernandez@ltenv.com	
Project Name:	B...			

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Page 1 of 1

Work Order Comments

Program:
☒ UST/PST
 ☐ PRP
 ☐ Brownfields
 ☐ RRC
 ☐ Superfund
 ☐

State of Project:

Reporting Level:
☐ I
 ☐ Level II
 ☐ Level III
 ☐ PST/UST
 ☐ TRRP
 ☐ Level IV
 ☐

Deliverables:
☐ EDD
 ☐ ADAPT
 ☐ Other:

Project Name: <u>BEU Hackberry 34 CTR</u>		Turn Around	
Project Number: <u>Ø1292ØØ63</u>		Routine ☒	
Project Location: <u>Rural Eddy County</u>		Rush:	
Sampler's Name: <u>Anna Byers</u>		Due Date:	
PO #: <u>NRM2Ø1Ø353797</u>		Quote #:	
SAMPLE RECEIPT			
Temperature (°C):	<u>1.0/0.8</u>	Yes ☐ No ☒	Wet Ice: Yes ☒ No ☐
Received Intact:	<u>Yes</u> No ☐	Thermometer ID: <u>TNM007</u>	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor: <u>-0.2</u>	
Sample Custody Seals:	Yes ☒ No ☐ N/A	Total Containers: <u>10</u>	
of Containers		Pres. Code	
(EPA 8Ø15)			
(EPA 8Ø21)			
ide (EPA 3ØØ.Ø)			
ANALYSIS REQUEST			
Preservative Codes			
MeOH: Me			
None: NO			
HNO3: HN			
H2SO4: H2			
HCL: HL			
NaOH: Na			
Zn Acetate+ NaOH: Zn			
TAT starts the day received by the lab, if			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH	BTEX	Chloro	Sample Comments
BHØ5		S	7/9/20	12:45	1-1.5'	1	X	X	X	
BHØ5A		S		13:00	2-2.5'	1	X	X	X	
BHØ6		S		13:15	0.2-0.5'	1	X	X	X	
BHØ6A		S		13:55	2-2.5'	1	X	X	X	
BHØ7		S		14:18	0.2-0.5'	1	X	X	X	
BHØ7A		S		15:05	2-2.5'	1	X	X	X	

Handwritten notes:

- A vertical arrow points from the "Date Sampled" column down to the "Time Sampled" column.
- The word "Hard" is written at the bottom right.
- A large handwritten signature or initials are present across the middle of the page.

Total 200.7 / 6010 200.8 / 6020:

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

[illegible]

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.

[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.13.2020 12.50.00 PM

Work Order #: 667020

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)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#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

Samples received in bulk containers.

*** 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: 07.13.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.15.2020

Certificate of Analysis Summary 667580



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Eddy County

Date Received in Lab: Fri 07.17.2020 13:40
Report Date: 07.20.2020 15:15
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667580-001	667580-002	667580-003	667580-004	667580-005	667580-006
	<i>Field Id:</i>	BH08	BH08A	BH09	BH09A	BH10	BH10A
	<i>Depth:</i>	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.17.2020 07:10	07.17.2020 07:15	07.17.2020 06:40	07.17.2020 06:55	07.17.2020 07:50	07.17.2020 08:00
BTEX by EPA 8021B	<i>Extracted:</i>	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35
	<i>Analyzed:</i>	07.18.2020 03:30	07.18.2020 03:51	07.18.2020 04:12	07.18.2020 04:34	07.18.2020 04:55	07.18.2020 05:17
	<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	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403	<0.00400 0.00400	<0.00399 0.00399	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30
	<i>Analyzed:</i>	07.17.2020 23:53	07.18.2020 00:09	07.18.2020 00:15	07.18.2020 00:20	07.18.2020 00:26	07.18.2020 00:43
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		113 9.92	<9.98 9.98	823 9.94	58.5 10.0	587 10.0	53.4 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	07.17.2020 16:00	07.17.2020 16:00	07.17.2020 16:00	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30
	<i>Analyzed:</i>	07.17.2020 22:44	07.17.2020 23:04	07.17.2020 23:25	07.18.2020 03:28	07.18.2020 04:29	07.18.2020 04:49
	<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)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8
Total GRO-DRO		<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8
Total TPH		<49.9 49.9	<50.2 50.2	<50.3 50.3	<49.9 49.9	<49.9 49.9	<49.8 49.8

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 667580



Xenco

LT Environmental, Inc., Arvada, CO

Project Name: Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Eddy County

Date Received in Lab: Fri 07.17.2020 13:40
Report Date: 07.20.2020 15:15
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667580-007	667580-008	667580-009	667580-010		
	<i>Field Id:</i>	BH11	BH11A	BH12	BH12A		
	<i>Depth:</i>	0.2-0.5 ft	2-2.5 ft	0.2-0.5 ft	2-2.5 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	07.17.2020 08:20	07.17.2020 08:30	07.17.2020 08:45	07.17.2020 08:55		
BTEX by EPA 8021B	<i>Extracted:</i>	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35	07.17.2020 17:35		
	<i>Analyzed:</i>	07.18.2020 05:38	07.18.2020 06:00	07.18.2020 06:21	07.18.2020 06:42		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
m,p-Xylenes		<0.00399 0.00399	<0.00397 0.00397	<0.00401 0.00401	<0.00404 0.00404		
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202		
Chloride by EPA 300	<i>Extracted:</i>	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30		
	<i>Analyzed:</i>	07.18.2020 00:48	07.18.2020 00:54	07.18.2020 00:59	07.18.2020 01:05		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		44.6 9.96	259 9.96	<9.92 9.92	<9.96 9.96		
TPH by SW8015 Mod	<i>Extracted:</i>	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30	07.17.2020 17:30		
	<i>Analyzed:</i>	07.18.2020 05:10	07.18.2020 05:30	07.18.2020 05:50	07.18.2020 06:11		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Diesel Range Organics (DRO)		<50.0 50.0	<50.1 50.1	59.8 50.2	<50.3 50.3		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<50.2 50.2	<50.3 50.3		
Total GRO-DRO		<50.0 50.0	<50.1 50.1	59.8 50.2	<50.3 50.3		
Total TPH		<50.0 50.0	<50.1 50.1	59.8 50.2	<50.3 50.3		

BRL - Below Reporting Limit

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



Xenco

Analytical Report 667580

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

Hackberry 34 CTB

012920063

07.20.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.20.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667580**

Hackberry 34 CTB

Project Address: Eddy County

Joseph Hernandez:

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 Eurofins Xenco, LLC Report Number(s) 667580. 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 Eurofins Xenco, LLC. 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. 667580 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 667580****LT Environmental, Inc., Arvada, CO**

Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH08	S	07.17.2020 07:10	0.2 - 0.5 ft	667580-001
BH08A	S	07.17.2020 07:15	2 - 2.5 ft	667580-002
BH09	S	07.17.2020 06:40	0.2 - 0.5 ft	667580-003
BH09A	S	07.17.2020 06:55	2 - 2.5 ft	667580-004
BH10	S	07.17.2020 07:50	0.2 - 0.5 ft	667580-005
BH10A	S	07.17.2020 08:00	2 - 2.5 ft	667580-006
BH11	S	07.17.2020 08:20	0.2 - 0.5 ft	667580-007
BH11A	S	07.17.2020 08:30	2 - 2.5 ft	667580-008
BH12	S	07.17.2020 08:45	0.2 - 0.5 ft	667580-009
BH12A	S	07.17.2020 08:55	2 - 2.5 ft	667580-010



Xenco

CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *Hackberry 34 CTB*

Project ID: 012920063

Work Order Number(s): 667580

Report Date: 07.20.2020

Date Received: 07.17.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH08** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-001 Date Collected: 07.17.2020 07:10 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	9.92	mg/kg	07.17.2020 23:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 16:00 Basis: Wet Weight
 Seq Number: 3132061

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.17.2020 22:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.17.2020 22:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.17.2020 22:44	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.17.2020 22:44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.17.2020 22:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.17.2020 22:44	
o-Terphenyl	84-15-1	112	%	70-135	07.17.2020 22:44	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH08**
Lab Sample Id: 667580-001

Matrix: Soil
Date Collected: 07.17.2020 07:10

Date Received: 07.17.2020 13:40
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.18.2020 03:30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.18.2020 03:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.18.2020 03:30		
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.18.2020 03:30		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH08A** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-002 Date Collected: 07.17.2020 07:15 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	07.18.2020 00:09	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 16:00 Basis: Wet Weight
 Seq Number: 3132061

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.17.2020 23:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.17.2020 23:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.17.2020 23:04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.17.2020 23:04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.17.2020 23:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	07.17.2020 23:04	
o-Terphenyl	84-15-1	113	%	70-135	07.17.2020 23:04	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH08A**
Lab Sample Id: 667580-002

Matrix: Soil
Date Collected: 07.17.2020 07:15

Date Received: 07.17.2020 13:40
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.18.2020 03:51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.18.2020 03:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.18.2020 03:51		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.18.2020 03:51		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH09** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-003 Date Collected: 07.17.2020 06:40 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	823	9.94	mg/kg	07.18.2020 00:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 16:00 Basis: Wet Weight
 Seq Number: 3132061

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.17.2020 23:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.17.2020 23:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.17.2020 23:25	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.17.2020 23:25	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.17.2020 23:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.17.2020 23:25	
o-Terphenyl	84-15-1	111	%	70-135	07.17.2020 23:25	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH09**
Lab Sample Id: 667580-003

Matrix: Soil
Date Collected: 07.17.2020 06:40

Date Received: 07.17.2020 13:40
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.18.2020 04:12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.18.2020 04:12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.18.2020 04:12		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.18.2020 04:12		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH09A** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-004 Date Collected: 07.17.2020 06:55 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.5	10.0	mg/kg	07.18.2020 00:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.18.2020 03:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.18.2020 03:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.18.2020 03:28	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.18.2020 03:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.18.2020 03:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	07.18.2020 03:28	
o-Terphenyl	84-15-1	117	%	70-135	07.18.2020 03:28	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH09A**
Lab Sample Id: 667580-004

Matrix: Soil
Date Collected: 07.17.2020 06:55

Date Received: 07.17.2020 13:40
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.18.2020 04:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.18.2020 04:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.18.2020 04:34		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.18.2020 04:34		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH10** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-005 Date Collected: 07.17.2020 07:50 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	587	10.0	mg/kg	07.18.2020 00:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.18.2020 04:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.18.2020 04:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.18.2020 04:29	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.18.2020 04:29	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.18.2020 04:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.18.2020 04:29	
o-Terphenyl	84-15-1	105	%	70-135	07.18.2020 04:29	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH10**
Lab Sample Id: 667580-005

Matrix: Soil
Date Collected: 07.17.2020 07:50

Date Received: 07.17.2020 13:40
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.18.2020 04:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.18.2020 04:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.18.2020 04:55		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.18.2020 04:55		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH10A** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-006 Date Collected: 07.17.2020 08:00 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.4	9.92	mg/kg	07.18.2020 00:43		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.18.2020 04:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.18.2020 04:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.18.2020 04:49	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.18.2020 04:49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.18.2020 04:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	07.18.2020 04:49	
o-Terphenyl	84-15-1	108	%	70-135	07.18.2020 04:49	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH10A**
Lab Sample Id: 667580-006

Matrix: Soil
Date Collected: 07.17.2020 08:00

Date Received: 07.17.2020 13:40
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.18.2020 05:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.18.2020 05:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.18.2020 05:17		
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.18.2020 05:17		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH11** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-007 Date Collected: 07.17.2020 08:20 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	44.6	9.96	mg/kg	07.18.2020 00:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.18.2020 05:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.18.2020 05:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.18.2020 05:10	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.18.2020 05:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.18.2020 05:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.18.2020 05:10	
o-Terphenyl	84-15-1	103	%	70-135	07.18.2020 05:10	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH11**
Lab Sample Id: 667580-007

Matrix: Soil
Date Collected: 07.17.2020 08:20

Date Received: 07.17.2020 13:40
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.18.2020 05:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.18.2020 05:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.18.2020 05:38	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.18.2020 05:38	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH11A** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-008 Date Collected: 07.17.2020 08:30 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	259	9.96	mg/kg	07.18.2020 00:54		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.18.2020 05:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.18.2020 05:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.18.2020 05:30	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.18.2020 05:30	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.18.2020 05:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.18.2020 05:30	
o-Terphenyl	84-15-1	104	%	70-135	07.18.2020 05:30	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH11A**
Lab Sample Id: 667580-008

Matrix: Soil
Date Collected: 07.17.2020 08:30

Date Received: 07.17.2020 13:40
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.18.2020 06:00	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.18.2020 06:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.18.2020 06:00		
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.18.2020 06:00		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH12** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-009 Date Collected: 07.17.2020 08:45 Sample Depth: 0.2 - 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	07.18.2020 00:59	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.18.2020 05:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	59.8	50.2	mg/kg	07.18.2020 05:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.18.2020 05:50	U	1
Total GRO-DRO	PHC628	59.8	50.2	mg/kg	07.18.2020 05:50		1
Total TPH	PHC635	59.8	50.2	mg/kg	07.18.2020 05:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	07.18.2020 05:50	
o-Terphenyl	84-15-1	102	%	70-135	07.18.2020 05:50	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH12**
Lab Sample Id: 667580-009

Matrix: Soil
Date Collected: 07.17.2020 08:45

Date Received: 07.17.2020 13:40
Sample Depth: 0.2 - 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.18.2020 06:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.18.2020 06:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.18.2020 06:21		
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.18.2020 06:21		



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH12A** Matrix: Soil Date Received: 07.17.2020 13:40
 Lab Sample Id: 667580-010 Date Collected: 07.17.2020 08:55 Sample Depth: 2 - 2.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.96	9.96	mg/kg	07.18.2020 01:05	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.17.2020 17:30 Basis: Wet Weight
 Seq Number: 3132054

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	07.18.2020 06:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	07.18.2020 06:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	07.18.2020 06:11	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	07.18.2020 06:11	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	07.18.2020 06:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	07.18.2020 06:11	
o-Terphenyl	84-15-1	104	%	70-135	07.18.2020 06:11	



Certificate of Analytical Results 667580

LT Environmental, Inc., Arvada, CO

Hackberry 34 CTB

Sample Id: **BH12A**
Lab Sample Id: 667580-010

Matrix: Soil
Date Collected: 07.17.2020 08:55

Date Received: 07.17.2020 13:40
Sample Depth: 2 - 2.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.17.2020 17:35

Basis: Wet Weight

Seq Number: 3132051

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.18.2020 06:42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.18.2020 06:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.18.2020 06:42	
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.18.2020 06:42	

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Xenco

QC Summary 667580

LT Environmental, Inc.

Hackberry 34 CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3132062

MB Sample Id: 7707653-1-BLK

Matrix: Solid

Prep Method: E300P

Date Prep: 07.17.2020

LCS Sample Id: 7707653-1-BKS

LCSD Sample Id: 7707653-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	255	102	266	106	90-110	4	20	mg/kg	07.17.2020 23:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3132062

Parent Sample Id: 667580-001

Matrix: Soil

Prep Method: E300P

Date Prep: 07.17.2020

MS Sample Id: 667580-001 S

MSD Sample Id: 667580-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	113	200	327	107	315	101	90-110	4	20	mg/kg	07.17.2020 23:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132061

MB Sample Id: 7707606-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.17.2020

LCS Sample Id: 7707606-1-BKS

LCSD Sample Id: 7707606-1-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	1040	104	1040	104	70-135	0	35	mg/kg	07.17.2020 14:31	
Diesel Range Organics (DRO)	<50.0	1000	1010	101	1180	118	70-135	16	35	mg/kg	07.17.2020 14:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		126		127		70-135	%	07.17.2020 14:31
o-Terphenyl	119		126		124		70-135	%	07.17.2020 14:31

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132054

MB Sample Id: 7707645-1-BLK

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.17.2020

LCS Sample Id: 7707645-1-BKS

LCSD Sample Id: 7707645-1-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	966	97	959	96	70-135	1	35	mg/kg	07.18.2020 02:48	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1070	107	70-135	1	35	mg/kg	07.18.2020 02:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		126		125		70-135	%	07.18.2020 02:48
o-Terphenyl	115		116		114		70-135	%	07.18.2020 02:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132061

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.17.2020

MB Sample Id: 7707606-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.17.2020 14:10	

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



Xenco

QC Summary 667580

LT Environmental, Inc.

Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132054

Matrix: Solid

Prep Method: SW8015P

Date Prep: 07.17.2020

MB Sample Id: 7707645-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

07.18.2020 02:27

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132061

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.17.2020

Parent Sample Id: 667509-014

MS Sample Id: 667509-014 S

MSD Sample Id: 667509-014 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.0

Spike
Amount

999

MS
Result

1010

MS
%Rec

101

MSD
Result

948

MSD
%Rec

95

Limits

70-135

%RPD

6

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.17.2020 15:34

Flag

Diesel Range Organics (DRO)

<50.0

999

1110

111

1040

104

70-135

7

35

mg/kg

07.17.2020 15:34

Surrogate

1-Chlorooctane

MS
%Rec

123

MS
FlagMSD
%Rec

121

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

07.17.2020 15:34

o-Terphenyl

106

100

70-135

%

07.17.2020 15:34

Analytical Method: TPH by SW8015 Mod

Seq Number: 3132054

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.17.2020

Parent Sample Id: 667580-004

MS Sample Id: 667580-004 S

MSD Sample Id: 667580-004 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.0

Spike
Amount

999

MS
Result

959

MS
%Rec

96

MSD
Result

916

MSD
%Rec

91

Limits

70-135

%RPD

5

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.18.2020 03:48

Flag

Diesel Range Organics (DRO)

<50.0

999

1050

105

1010

100

70-135

4

35

mg/kg

07.18.2020 03:48

Surrogate

1-Chlorooctane

MS
%Rec

125

MS
FlagMSD
%Rec

119

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

07.18.2020 03:48

o-Terphenyl

111

107

70-135

%

07.18.2020 03:48

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132051

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.17.2020

MB Sample Id: 7707642-1-BLK

LCS Sample Id: 7707642-1-BKS

LCSD Sample Id: 7707642-1-BSD

Parameter

Benzene

MB
Result

<0.00200

Spike
Amount

0.100

LCS
Result

0.110

LCS
%Rec

110

LCSD
Result

0.111

LCSD
%Rec

111

Limits

70-130

%RPD

1

RPD
Limit

35

Units

mg/kg

Analysis
Date

07.18.2020 01:31

Flag

Toluene

<0.00200

0.100

0.103

103

0.104

104

70-130

1

35

mg/kg

07.18.2020 01:31

Ethylbenzene

<0.00200

0.100

0.0958

96

0.0965

97

71-129

1

35

mg/kg

07.18.2020 01:31

m,p-Xylenes

<0.00400

0.200

0.195

98

0.196

98

70-135

1

35

mg/kg

07.18.2020 01:31

o-Xylene

<0.00200

0.100

0.0966

97

0.0974

97

71-133

1

35

mg/kg

07.18.2020 01:31

Surrogate

1,4-Difluorobenzene

MB
%Rec

98

MB
FlagLCS
%Rec

100

LCS
FlagLCSD
%Rec

100

LCSD
Flag

Limits

70-130

Units

%

Analysis
Date

07.18.2020 01:31

4-Bromofluorobenzene

94

103

102

70-130

%

07.18.2020 01:31

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.

Hackberry 34 CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3132051

Parent Sample Id: 667580-001

Matrix: Soil

MS Sample Id: 667580-001 S

Prep Method: SW5035A

Date Prep: 07.17.2020

MSD Sample Id: 667580-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.115	115	0.0935	94	70-130	21	35	mg/kg	07.18.2020 07:04	
Toluene	<0.00199	0.0996	0.106	106	0.0778	78	70-130	31	35	mg/kg	07.18.2020 07:04	
Ethylbenzene	<0.00199	0.0996	0.0982	99	0.0801	80	71-129	20	35	mg/kg	07.18.2020 07:04	
m,p-Xylenes	<0.00398	0.199	0.198	99	0.146	73	70-135	30	35	mg/kg	07.18.2020 07:04	
o-Xylene	<0.00199	0.0996	0.0994	100	0.0773	77	71-133	25	35	mg/kg	07.18.2020 07:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	07.18.2020 07:04
4-Bromofluorobenzene	99		102		70-130	%	07.18.2020 07:04

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:

16167580

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) 820-2000 West Palm Beach, FL (561) 689-6701

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Page 1 of 1

Project Manager:	JOSEPH HERNANDEZ	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 894-5641	Email:	jhernandez@xenco.com abyers@xenco.com

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

Project Name:	Hackberry 34 CRB	Turn Around	☒
Project Number:	0129200603	Routine	☒
Project Location:	Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	NRM2010853797	Quote #:	

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes	Sample Comments
BH08	S		7/17/20	0710	0.2-0.5'	1	TPH (EPA 8015)	MeOH: Me	
BH08A				0715	2-2.5'	1	BTEX (EPA 8021)	None: NO	
BH09				0640	0.2-0.5'	1	Chloride (EPA 300.0)	HNO3: HN	
BH09A				0655	2-2.5'	1		H2SO4: H2	
BH10				0750	0.2-0.5'	1		HCL: HL	
BH10A				0800	2-2.5'	1		NaOH: Na	
BH11				0800	0.2-0.5'	1		Zn Acetate+ NaOH: Zn	
BH11A				0830	2-2.5'	1			
BH12				0845	0.2-0.5'	1			
BH12A				0855	2-2.5'	1			

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

8RCRA 13PPM Texas 11 A 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
 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
Anna Byers	Wendy	07/17/20 1340			7/17/20



Certificate of Analysis Summary 667021

LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50
Report Date: 07.23.2020 14:24
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667021-001	667021-002	667021-003	667021-004	667021-005	667021-006
	Field Id:	FS01	FS02	FS03	FS04	FS05	FS06
	Depth:	2- ft	2- ft	2- ft	2- ft	2- ft	2- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	07.13.2020 10:35	07.13.2020 10:40	07.13.2020 10:45	07.13.2020 10:50	07.13.2020 10:55	07.13.2020 10:25
BTEX by EPA 8021B	Extracted:	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30
	Analyzed:	07.14.2020 10:09	07.13.2020 19:03	07.13.2020 19:23	07.13.2020 19:43	07.13.2020 20:04	07.14.2020 09:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00402 0.00402	<0.00402 0.00402	<0.00402 0.00402	<0.00399 0.00399	<0.00404 0.00404
o-Xylene		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202
Chloride by EPA 300	Extracted:	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40
	Analyzed:	07.13.2020 16:38	07.13.2020 16:43	07.13.2020 16:49	07.13.2020 17:06	07.13.2020 17:11	07.13.2020 17:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		195 9.98	209 9.98	73.9 10.1	25.6 10.0	83.8 10.1	34.4 9.90
TPH by SW8015 Mod	Extracted:	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30
	Analyzed:	07.14.2020 09:47	07.14.2020 10:07	07.14.2020 10:27	07.14.2020 10:48	07.14.2020 11:08	07.14.2020 11:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 667021



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50**Report Date:** 07.23.2020 14:24**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667021-007	667021-008	667021-009	667021-010	667021-011	667021-012
	<i>Field Id:</i>	FS07	FS08	FS09	FS10	FS11	SW03
	<i>Depth:</i>	2- ft	2- ft	2- ft	2- ft	2- ft	0-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.13.2020 10:20	07.13.2020 10:15	07.13.2020 10:10	07.13.2020 10:05	07.13.2020 10:00	07.13.2020 11:10
BTEX by EPA 8021B	<i>Extracted:</i>	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30
	<i>Analyzed:</i>	07.14.2020 08:51	07.14.2020 10:29	07.14.2020 11:45	07.14.2020 12:05	07.14.2020 12:26	07.14.2020 17:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.0253 0.0253
Toluene		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	3.64 0.101
Ethylbenzene		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	6.77 0.101
m,p-Xylenes		<0.0194 0.0194	<0.00397 0.00397	<0.00399 0.00399	<0.00403 0.00403	<0.00397 0.00397	9.30 0.202
o-Xylene		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	5.29 0.101
Total Xylenes		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	14.6 0.101
Total BTEX		<0.00971 0.00971	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	25.0 0.0253
Chloride by EPA 300	<i>Extracted:</i>	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40
	<i>Analyzed:</i>	07.13.2020 17:22	07.13.2020 17:28	07.13.2020 17:33	07.13.2020 17:50	07.13.2020 17:56	07.13.2020 18:12
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		37.3 10.0	24.0 10.1	18.3 9.98	15.3 10.0	25.4 10.0	304 10.1
TPH by SW8015 Mod	<i>Extracted:</i>	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 16:40
	<i>Analyzed:</i>	07.14.2020 12:10	07.14.2020 11:49	07.14.2020 11:08	07.14.2020 11:29	07.14.2020 11:49	07.13.2020 20:59
	<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)		<49.9 49.9	<50.0 50.0	<50.1 50.1	<50.2 50.2	<49.9 49.9	767 D 251
Diesel Range Organics (DRO)		547 49.9	<50.0 50.0	<50.1 50.1	<50.2 50.2	<49.9 49.9	4310 D 251
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.1 50.1	<50.2 50.2	<49.9 49.9	308 D 251
Total GRO-DRO		547 49.9	<50.0 50.0	<50.1 50.1	<50.2 50.2	<49.9 49.9	5080 251
Total TPH		547 49.9	<50.0 50.0	<50.1 50.1	<50.2 50.2	<49.9 49.9	5390 251

BRL - Below Reporting Limit

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Certificate of Analysis Summary 667021



LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
Contact: Joseph Hernandez
Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50**Report Date:** 07.23.2020 14:24**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	667021-013	667021-014	667021-015	667021-016	667021-017	667021-018
	<i>Field Id:</i>	SW04	SW05	SW06	SW07	SW08	SW01
	<i>Depth:</i>	0.5- ft	1- ft	2- ft	0.5- ft	1- ft	0-2 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	07.13.2020 11:14	07.13.2020 11:15	07.13.2020 11:27	07.13.2020 11:28	07.13.2020 11:30	07.09.2020 15:45
BTEX by EPA 8021B	<i>Extracted:</i>	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30	07.13.2020 14:30
	<i>Analyzed:</i>	07.14.2020 17:21	07.14.2020 17:42	07.14.2020 13:47	07.14.2020 15:04	07.14.2020 15:24	07.14.2020 15:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.100 0.100	<0.0998 0.0998	<0.00200 0.00200	<0.00200 0.00200	<0.0105 0.0105	<0.00200 0.00200
Toluene		1.67 0.100	<0.0998 0.0998	<0.00200 0.00200	<0.00200 0.00200	0.112 0.0105	<0.00200 0.00200
Ethylbenzene		2.65 0.100	<0.0998 0.0998	<0.00200 0.00200	<0.00200 0.00200	0.603 0.0105	<0.00200 0.00200
m,p-Xylenes		4.66 0.200	6.31 0.798	0.0229 0.00399	<0.00399 0.00399	0.433 0.0211	<0.00401 0.00401
o-Xylene		5.55 0.100	15.8 0.399	<0.00200 0.00200	<0.00200 0.00200	0.884 0.0105	<0.00200 0.00200
Total Xylenes		10.2 0.100	22.1 0.399	0.0229 0.00200	<0.00200 0.00200	1.32 0.0105	<0.00200 0.00200
Total BTEX		14.5 0.100	22.1 0.0998	0.0229 0.00200	<0.00200 0.00200	2.03 0.0105	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40	07.13.2020 15:40
	<i>Analyzed:</i>	07.13.2020 18:18	07.13.2020 18:24	07.13.2020 18:29	07.13.2020 18:35	07.13.2020 18:40	07.13.2020 18:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8020 101	725 9.94	39.8 10.1	120 9.92	130 9.94	144 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	07.13.2020 16:40	07.13.2020 16:40	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30	07.13.2020 15:30
	<i>Analyzed:</i>	07.13.2020 21:20	07.13.2020 21:40	07.14.2020 12:10	07.13.2020 18:35	07.13.2020 22:01	07.13.2020 18:55
	<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)		705 D 251	1490 D 250	<50.2 50.2	<50.2 50.2	1050 D 251	<50.1 50.1
Diesel Range Organics (DRO)		9080 D 251	9980 D 250	<50.2 50.2	<50.2 50.2	11900 D 251	<50.1 50.1
Motor Oil Range Hydrocarbons (MRO)		859 D 251	923 D 250	<50.2 50.2	<50.2 50.2	1400 D 251	<50.1 50.1
Total GRO-DRO		9790 251	11500 250	<50.2 50.2	<50.2 50.2	13000 251	<50.1 50.1
Total TPH		10600 251	12400 250	<50.2 50.2	<50.2 50.2	14400 251	<50.1 50.1

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 667021

LT Environmental, Inc., Arvada, CO

Project Name: BEU Hackberry 34 CTB

Project Id: 012920063
 Contact: Joseph Hernandez
 Project Location: Rural Eddy County

Date Received in Lab: Mon 07.13.2020 12:50
 Report Date: 07.23.2020 14:24
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	667021-019	667021-020				
	Field Id:	SW02	SW09				
	Depth:	0-2 ft	0.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	07.09.2020 15:50	07.13.2020 11:17				
BTEX by EPA 8021B	Extracted:	07.13.2020 14:50	07.13.2020 14:50				
	Analyzed:	07.13.2020 18:32	07.14.2020 14:13				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00199 0.00199	2.70 0.398				
	Toluene	<0.00199 0.00199	48.3 0.398				
	Ethylbenzene	<0.00199 0.00199	45.1 0.398				
	m,p-Xylenes	<0.00398 0.00398	85.4 0.797				
	o-Xylene	<0.00199 0.00199	38.1 0.398				
	Total Xylenes	<0.00199 0.00199	124 0.398				
	Total BTEX	<0.00199 0.00199	220 0.398				
Chloride by EPA 300	Extracted:	07.13.2020 17:44	07.13.2020 17:44				
	Analyzed:	07.13.2020 19:19	07.13.2020 19:36				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	55.5 10.0	751 10.1				
TPH by SW8015 Mod	Extracted:	07.13.2020 15:30	07.13.2020 16:40				
	Analyzed:	07.13.2020 19:16	07.13.2020 22:21				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	3010 D 251				
	Diesel Range Organics (DRO)	<49.8 49.8	16300 D 251				
	Motor Oil Range Hydrocarbons (MRO)	<49.8 49.8	1560 D 251				
	Total GRO-DRO	<49.8 49.8	19300 251				
	Total TPH	<49.8 49.8	20900 251				

BRL - Below Reporting Limit

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





Environment Testing
Xenco

Analytical Report 667021

for

LT Environmental, Inc.

Project Manager: Joseph Hernandez

BEU Hackberry 34 CTB

012920063

07.23.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



07.23.2020

Project Manager: **Joseph Hernandez**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **667021**

BEU Hackberry 34 CTB

Project Address: Rural Eddy County

Joseph Hernandez:

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 Eurofins Xenco, LLC Report Number(s) 667021. 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 Eurofins Xenco, LLC. 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. 667021 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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



Sample Cross Reference 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07.13.2020 10:35	2 ft	667021-001
FS02	S	07.13.2020 10:40	2 ft	667021-002
FS03	S	07.13.2020 10:45	2 ft	667021-003
FS04	S	07.13.2020 10:50	2 ft	667021-004
FS05	S	07.13.2020 10:55	2 ft	667021-005
FS06	S	07.13.2020 10:25	2 ft	667021-006
FS07	S	07.13.2020 10:20	2 ft	667021-007
FS08	S	07.13.2020 10:15	2 ft	667021-008
FS09	S	07.13.2020 10:10	2 ft	667021-009
FS10	S	07.13.2020 10:05	2 ft	667021-010
FS11	S	07.13.2020 10:00	2 ft	667021-011
SW03	S	07.13.2020 11:10	0 - 2 ft	667021-012
SW04	S	07.13.2020 11:14	0.5 ft	667021-013
SW05	S	07.13.2020 11:15	1 ft	667021-014
SW06	S	07.13.2020 11:27	2 ft	667021-015
SW07	S	07.13.2020 11:28	0.5 ft	667021-016
SW08	S	07.13.2020 11:30	1 ft	667021-017
SW01	S	07.09.2020 15:45	0 - 2 ft	667021-018
SW02	S	07.09.2020 15:50	0 - 2 ft	667021-019
SW09	S	07.13.2020 11:17	0.5 ft	667021-020



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *BEU Hackberry 34 CTB*

Project ID: 012920063
Work Order Number(s): 667021

Report Date: 07.23.2020
Date Received: 07.13.2020

Sample receipt non conformances and comments:

V1.001 Revision. Re runs reported ber client. Samples 001,007,012,013,014,017,020

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS01** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-001 Date Collected: 07.13.2020 10:35 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	195	9.98	mg/kg	07.13.2020 16:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.21.2020 11:29		1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.21.2020 11:29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.21.2020 11:29		1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.21.2020 11:29		1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.21.2020 11:29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.14.2020 09:47	
o-Terphenyl	84-15-1	123	%	70-135	07.14.2020 09:47	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS01**
Lab Sample Id: 667021-001

Matrix: Soil
Date Collected: 07.13.2020 10:35

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.14.2020 10:09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.14.2020 10:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.14.2020 10:09		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.14.2020 10:09		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS02** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-002 Date Collected: 07.13.2020 10:40 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	209	9.98	mg/kg	07.13.2020 16:43		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 10:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 10:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 10:07	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 10:07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 10:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	07.14.2020 10:07	
o-Terphenyl	84-15-1	121	%	70-135	07.14.2020 10:07	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS02**
Lab Sample Id: 667021-002

Matrix: Soil
Date Collected: 07.13.2020 10:40

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.13.2020 19:03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.13.2020 19:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.13.2020 19:03		
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.13.2020 19:03		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS03** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-003 Date Collected: 07.13.2020 10:45 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.9	10.1	mg/kg	07.13.2020 16:49		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 10:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 10:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 10:27	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 10:27	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 10:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	07.14.2020 10:27	
o-Terphenyl	84-15-1	131	%	70-135	07.14.2020 10:27	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS03**
Lab Sample Id: 667021-003

Matrix: Soil
Date Collected: 07.13.2020 10:45

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.13.2020 19:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.13.2020 19:23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.13.2020 19:23		
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.13.2020 19:23		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS04** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-004 Date Collected: 07.13.2020 10:50 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.6	10.0	mg/kg	07.13.2020 17:06		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 10:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 10:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 10:48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 10:48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 10:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	07.14.2020 10:48	
o-Terphenyl	84-15-1	132	%	70-135	07.14.2020 10:48	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS04**
Lab Sample Id: 667021-004

Matrix: Soil
Date Collected: 07.13.2020 10:50

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.13.2020 19:43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.13.2020 19:43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.13.2020 19:43		
4-Bromofluorobenzene	460-00-4	105	%	70-130	07.13.2020 19:43		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS05** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-005 Date Collected: 07.13.2020 10:55 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	83.8	10.1	mg/kg	07.13.2020 17:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 11:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 11:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 11:08	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 11:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 11:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	07.14.2020 11:08	
o-Terphenyl	84-15-1	134	%	70-135	07.14.2020 11:08	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS05**
Lab Sample Id: 667021-005

Matrix: Soil
Date Collected: 07.13.2020 10:55

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.13.2020 20:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.13.2020 20:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.13.2020 20:04		
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.13.2020 20:04		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS06** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-006 Date Collected: 07.13.2020 10:25 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.4	9.90	mg/kg	07.13.2020 17:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 11:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 11:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 11:29	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 11:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 11:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	07.14.2020 11:29	
o-Terphenyl	84-15-1	134	%	70-135	07.14.2020 11:29	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS06**
Lab Sample Id: 667021-006

Matrix: Soil
Date Collected: 07.13.2020 10:25

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.14.2020 09:28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.14.2020 09:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.14.2020 09:28		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.14.2020 09:28		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS07** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-007 Date Collected: 07.13.2020 10:20 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.3	10.0	mg/kg	07.13.2020 17:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.21.2020 11:50		1
Diesel Range Organics (DRO)	C10C28DRO	547	49.9	mg/kg	07.21.2020 11:50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.21.2020 11:50		1
Total GRO-DRO	PHC628	547	49.9	mg/kg	07.21.2020 11:50		1
Total TPH	PHC635	547	49.9	mg/kg	07.21.2020 11:50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	07.14.2020 12:10	
o-Terphenyl	84-15-1	130	%	70-135	07.14.2020 12:10	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS07**
Lab Sample Id: 667021-007

Matrix: Soil
Date Collected: 07.13.2020 10:20

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1
Toluene	108-88-3	<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1
Ethylbenzene	100-41-4	<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1
m,p-Xylenes	179601-23-1	<0.0194	0.0194	mg/kg	07.14.2020 08:51	U	1
o-Xylene	95-47-6	<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1
Total Xylenes	1330-20-7	<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1
Total BTEX		<0.00971	0.00971	mg/kg	07.14.2020 08:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.14.2020 08:51	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.14.2020 08:51	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS08** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-008 Date Collected: 07.13.2020 10:15 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.0	10.1	mg/kg	07.13.2020 17:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131564

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	07.14.2020 11:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	07.14.2020 11:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	07.14.2020 11:49	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	07.14.2020 11:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	07.14.2020 11:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	07.14.2020 11:49	
o-Terphenyl	84-15-1	134	%	70-135	07.14.2020 11:49	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS08**
Lab Sample Id: 667021-008

Matrix: Soil
Date Collected: 07.13.2020 10:15

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.14.2020 10:29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.14.2020 10:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.14.2020 10:29		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.14.2020 10:29		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS09** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-009 Date Collected: 07.13.2020 10:10 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.3	9.98	mg/kg	07.13.2020 17:33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.14.2020 11:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.14.2020 11:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.14.2020 11:08	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.14.2020 11:08	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.14.2020 11:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.14.2020 11:08	
o-Terphenyl	84-15-1	110	%	70-135	07.14.2020 11:08	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS09**
Lab Sample Id: 667021-009

Matrix: Soil
Date Collected: 07.13.2020 10:10

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.14.2020 11:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.14.2020 11:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.14.2020 11:45		
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.14.2020 11:45		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS10** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-010 Date Collected: 07.13.2020 10:05 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.3	10.0	mg/kg	07.13.2020 17:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.14.2020 11:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.14.2020 11:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.14.2020 11:29	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.14.2020 11:29	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.14.2020 11:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	07.14.2020 11:29	
o-Terphenyl	84-15-1	105	%	70-135	07.14.2020 11:29	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS10**
Lab Sample Id: 667021-010

Matrix: Soil
Date Collected: 07.13.2020 10:05

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.14.2020 12:05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.14.2020 12:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.14.2020 12:05	
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.14.2020 12:05	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS11** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-011 Date Collected: 07.13.2020 10:00 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.4	10.0	mg/kg	07.13.2020 17:56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	07.14.2020 11:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	07.14.2020 11:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	07.14.2020 11:49	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	07.14.2020 11:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	07.14.2020 11:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	07.14.2020 11:49	
o-Terphenyl	84-15-1	112	%	70-135	07.14.2020 11:49	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **FS11**
Lab Sample Id: 667021-011

Matrix: Soil
Date Collected: 07.13.2020 10:00

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.14.2020 12:26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.14.2020 12:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.14.2020 12:26	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.14.2020 12:26	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW03** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-012 Date Collected: 07.13.2020 11:10 Sample Depth: 0 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	304	10.1	mg/kg	07.13.2020 18:12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	767	251	mg/kg	07.21.2020 12:10	D	5
Diesel Range Organics (DRO)	C10C28DRO	4310	251	mg/kg	07.21.2020 12:10	D	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	308	251	mg/kg	07.21.2020 12:10	D	5
Total GRO-DRO	PHC628	5080	251	mg/kg	07.21.2020 12:10		5
Total TPH	PHC635	5390	251	mg/kg	07.21.2020 12:10		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	07.13.2020 20:59	
o-Terphenyl	84-15-1	121	%	70-135	07.13.2020 20:59	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW03**
Lab Sample Id: 667021-012

Matrix: Soil
Date Collected: 07.13.2020 11:10

Date Received: 07.13.2020 12:50
Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0253	0.0253	mg/kg	07.14.2020 17:01	U	1
Toluene	108-88-3	3.64	0.101	mg/kg	07.14.2020 17:01		1
Ethylbenzene	100-41-4	6.77	0.101	mg/kg	07.14.2020 17:01		1
m,p-Xylenes	179601-23-1	9.30	0.202	mg/kg	07.14.2020 17:01		1
o-Xylene	95-47-6	5.29	0.101	mg/kg	07.14.2020 17:01		1
Total Xylenes	1330-20-7	14.6	0.101	mg/kg	07.14.2020 17:01		1
Total BTEX		25.0	0.0253	mg/kg	07.14.2020 17:01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	07.14.2020 17:01	
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.14.2020 17:01	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW04** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-013 Date Collected: 07.13.2020 11:14 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8020	101	mg/kg	07.13.2020 18:18		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	705	251	mg/kg	07.21.2020 12:30	D	5
Diesel Range Organics (DRO)	C10C28DRO	9080	251	mg/kg	07.21.2020 12:30	D	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	859	251	mg/kg	07.21.2020 12:30	D	5
Total GRO-DRO	PHC628	9790	251	mg/kg	07.21.2020 12:30		5
Total TPH	PHC635	10600	251	mg/kg	07.21.2020 12:30		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.13.2020 21:20	
o-Terphenyl	84-15-1	120	%	70-135	07.13.2020 21:20	



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LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW04**
Lab Sample Id: 667021-013

Matrix: Soil
Date Collected: 07.13.2020 11:14

Date Received: 07.13.2020 12:50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.100	0.100	mg/kg	07.14.2020 17:21	U	1
Toluene	108-88-3	1.67	0.100	mg/kg	07.14.2020 17:21		1
Ethylbenzene	100-41-4	2.65	0.100	mg/kg	07.14.2020 17:21		1
m,p-Xylenes	179601-23-1	4.66	0.200	mg/kg	07.14.2020 17:21		1
o-Xylene	95-47-6	5.55	0.100	mg/kg	07.14.2020 17:21		1
Total Xylenes	1330-20-7	10.2	0.100	mg/kg	07.14.2020 17:21		1
Total BTEX		14.5	0.100	mg/kg	07.14.2020 17:21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.14.2020 17:21	
1,4-Difluorobenzene	540-36-3	95	%	70-130	07.14.2020 17:21	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW05** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-014 Date Collected: 07.13.2020 11:15 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	725	9.94	mg/kg	07.13.2020 18:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1490	250	mg/kg	07.21.2020 12:51	D	5
Diesel Range Organics (DRO)	C10C28DRO	9980	250	mg/kg	07.21.2020 12:51	D	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	923	250	mg/kg	07.21.2020 12:51	D	5
Total GRO-DRO	PHC628	11500	250	mg/kg	07.21.2020 12:51		5
Total TPH	PHC635	12400	250	mg/kg	07.21.2020 12:51		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	07.13.2020 21:40	
o-Terphenyl	84-15-1	110	%	70-135	07.13.2020 21:40	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW05**
Lab Sample Id: 667021-014

Matrix: Soil
Date Collected: 07.13.2020 11:15

Date Received: 07.13.2020 12:50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0998	0.0998	mg/kg	07.14.2020 17:42	U	200
Toluene	108-88-3	<0.0998	0.0998	mg/kg	07.14.2020 17:42	U	200
Ethylbenzene	100-41-4	<0.0998	0.0998	mg/kg	07.14.2020 17:42	U	200
m,p-Xylenes	179601-23-1	6.31	0.798	mg/kg	07.14.2020 17:42		200
o-Xylene	95-47-6	15.8	0.399	mg/kg	07.14.2020 17:42		200
Total Xylenes	1330-20-7	22.1	0.399	mg/kg	07.14.2020 17:42		200
Total BTEX		22.1	0.0998	mg/kg	07.14.2020 17:42		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.14.2020 17:42		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.14.2020 17:42		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW06** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-015 Date Collected: 07.13.2020 11:27 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	39.8	10.1	mg/kg	07.13.2020 18:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.14.2020 12:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.14.2020 12:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.14.2020 12:10	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.14.2020 12:10	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.14.2020 12:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	07.14.2020 12:10	
o-Terphenyl	84-15-1	114	%	70-135	07.14.2020 12:10	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW06**
Lab Sample Id: 667021-015

Matrix: Soil
Date Collected: 07.13.2020 11:27

Date Received: 07.13.2020 12:50
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 13:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.14.2020 13:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 13:47	U	1
m,p-Xylenes	179601-23-1	0.0229	0.00399	mg/kg	07.14.2020 13:47		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 13:47	U	1
Total Xylenes	1330-20-7	0.0229	0.00200	mg/kg	07.14.2020 13:47		1
Total BTEX		0.0229	0.00200	mg/kg	07.14.2020 13:47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.14.2020 13:47	
1,4-Difluorobenzene	540-36-3	93	%	70-130	07.14.2020 13:47	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW07** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-016 Date Collected: 07.13.2020 11:28 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	120	9.92	mg/kg	07.13.2020 18:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	07.13.2020 18:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	07.13.2020 18:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	07.13.2020 18:35	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	07.13.2020 18:35	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	07.13.2020 18:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	07.13.2020 18:35	
o-Terphenyl	84-15-1	103	%	70-135	07.13.2020 18:35	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW07**
Lab Sample Id: 667021-016

Matrix: Soil
Date Collected: 07.13.2020 11:28

Date Received: 07.13.2020 12:50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.14.2020 15:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.14.2020 15:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.14.2020 15:04		
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.14.2020 15:04		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW08** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-017 Date Collected: 07.13.2020 11:30 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	130	9.94	mg/kg	07.13.2020 18:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1050	251	mg/kg	07.21.2020 13:11	D	5
Diesel Range Organics (DRO)	C10C28DRO	11900	251	mg/kg	07.21.2020 13:11	D	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1400	251	mg/kg	07.21.2020 13:11	D	5
Total GRO-DRO	PHC628	13000	251	mg/kg	07.21.2020 13:11		5
Total TPH	PHC635	14400	251	mg/kg	07.21.2020 13:11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.13.2020 22:01	
o-Terphenyl	84-15-1	127	%	70-135	07.13.2020 22:01	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW08**
Lab Sample Id: 667021-017

Matrix: Soil
Date Collected: 07.13.2020 11:30

Date Received: 07.13.2020 12:50
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0105	0.0105	mg/kg	07.14.2020 15:24	U	1
Toluene	108-88-3	0.112	0.0105	mg/kg	07.14.2020 15:24		1
Ethylbenzene	100-41-4	0.603	0.0105	mg/kg	07.14.2020 15:24		1
m,p-Xylenes	179601-23-1	0.433	0.0211	mg/kg	07.14.2020 15:24		1
o-Xylene	95-47-6	0.884	0.0105	mg/kg	07.14.2020 15:24		1
Total Xylenes	1330-20-7	1.32	0.0105	mg/kg	07.14.2020 15:24		1
Total BTEX		2.03	0.0105	mg/kg	07.14.2020 15:24		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.14.2020 15:24		
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.14.2020 15:24		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW01** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-018 Date Collected: 07.09.2020 15:45 Sample Depth: 0 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 15:40 Basis: Wet Weight
 Seq Number: 3131513

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	144	10.0	mg/kg	07.13.2020 18:46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	07.13.2020 18:55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	07.13.2020 18:55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	07.13.2020 18:55	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	07.13.2020 18:55	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	07.13.2020 18:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	07.13.2020 18:55	
o-Terphenyl	84-15-1	108	%	70-135	07.13.2020 18:55	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW01**
Lab Sample Id: 667021-018

Matrix: Soil
Date Collected: 07.09.2020 15:45

Date Received: 07.13.2020 12:50
Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:30

Basis: Wet Weight

Seq Number: 3131532

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.14.2020 15:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.14.2020 15:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	07.14.2020 15:45	
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.14.2020 15:45	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW02** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-019 Date Collected: 07.09.2020 15:50 Sample Depth: 0 - 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	55.5	10.0	mg/kg	07.13.2020 19:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 15:30 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	07.13.2020 19:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	07.13.2020 19:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	07.13.2020 19:16	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	07.13.2020 19:16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	07.13.2020 19:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	07.13.2020 19:16	
o-Terphenyl	84-15-1	105	%	70-135	07.13.2020 19:16	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW02**
Lab Sample Id: 667021-019

Matrix: Soil
Date Collected: 07.09.2020 15:50

Date Received: 07.13.2020 12:50
Sample Depth: 0 - 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.13.2020 18:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.13.2020 18:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.13.2020 18:32		
1,4-Difluorobenzene	540-36-3	98	%	70-130	07.13.2020 18:32		



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW09** Matrix: Soil Date Received: 07.13.2020 12:50
 Lab Sample Id: 667021-020 Date Collected: 07.13.2020 11:17 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 07.13.2020 17:44 Basis: Wet Weight
 Seq Number: 3131514

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	751	10.1	mg/kg	07.13.2020 19:36		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 07.13.2020 16:40 Basis: Wet Weight
 Seq Number: 3131538

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3010	251	mg/kg	07.21.2020 13:31	D	5
Diesel Range Organics (DRO)	C10C28DRO	16300	251	mg/kg	07.21.2020 13:31	D	5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	1560	251	mg/kg	07.21.2020 13:31	D	5
Total GRO-DRO	PHC628	19300	251	mg/kg	07.21.2020 13:31		5
Total TPH	PHC635	20900	251	mg/kg	07.21.2020 13:31		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.13.2020 22:21	
o-Terphenyl	84-15-1	111	%	70-135	07.13.2020 22:21	



Certificate of Analytical Results 667021

LT Environmental, Inc., Arvada, CO

BEU Hackberry 34 CTB

Sample Id: **SW09**
Lab Sample Id: 667021-020

Matrix: Soil
Date Collected: 07.13.2020 11:17

Date Received: 07.13.2020 12:50
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 07.13.2020 14:50

Basis: Wet Weight

Seq Number: 3131589

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	2.70	0.398	mg/kg	07.14.2020 14:13		200
Toluene	108-88-3	48.3	0.398	mg/kg	07.14.2020 14:13		200
Ethylbenzene	100-41-4	45.1	0.398	mg/kg	07.14.2020 14:13		200
m,p-Xylenes	179601-23-1	85.4	0.797	mg/kg	07.14.2020 14:13		200
o-Xylene	95-47-6	38.1	0.398	mg/kg	07.14.2020 14:13		200
Total Xylenes	1330-20-7	124	0.398	mg/kg	07.14.2020 14:13		200
Total BTEX		220	0.398	mg/kg	07.14.2020 14:13		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.14.2020 14:13		
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.14.2020 14:13		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.
BEU Hackberry 34 CTB

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

MB Sample Id: 7707247-1-BLK

Matrix: Solid

LCS Sample Id: 7707247-1-BKS

Prep Method: E300P

Date Prep: 07.13.2020

LCSD Sample Id: 7707247-1-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	245	98	256	102	90-110	4	20	mg/kg	07.13.2020 16:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3131514

MB Sample Id: 7707248-1-BLK

Matrix: Solid

LCS Sample Id: 7707248-1-BKS

Prep Method: E300P

Date Prep: 07.13.2020

LCSD Sample Id: 7707248-1-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	244	98	255	102	90-110	4	20	mg/kg	07.13.2020 19:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

Parent Sample Id: 667017-001

Matrix: Soil

MS Sample Id: 667017-001 S

Prep Method: E300P

Date Prep: 07.13.2020

MSD Sample Id: 667017-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3480	200	3750	90	3760	95	90-110	0	20	mg/kg	07.13.2020 16:21	

Analytical Method: Chloride by EPA 300

Seq Number: 3131513

Parent Sample Id: 667021-009

Matrix: Soil

MS Sample Id: 667021-009 S

Prep Method: E300P

Date Prep: 07.13.2020

MSD Sample Id: 667021-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	18.3	200	217	99	217	99	90-110	0	20	mg/kg	07.13.2020 17:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3131514

Parent Sample Id: 667021-019

Matrix: Soil

MS Sample Id: 667021-019 S

Prep Method: E300P

Date Prep: 07.13.2020

MSD Sample Id: 667021-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	55.5	201	256	100	256	100	90-110	0	20	mg/kg	07.13.2020 19:25	

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.
BEU Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

MB Sample Id: 7707282-1-BLK

Matrix: Solid

LCS Sample Id: 7707282-1-BKS

Prep Method: SW8015P

Date Prep: 07.13.2020

LCSD Sample Id: 7707282-1-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	1230	123	1090	109	70-135	12	35	mg/kg	07.14.2020 10:07	
Diesel Range Organics (DRO)	<50.0	1000	1220	122	1060	106	70-135	14	35	mg/kg	07.14.2020 10:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		130		117		70-135	%	07.14.2020 10:07
o-Terphenyl	80		116		103		70-135	%	07.14.2020 10:07

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

MB Sample Id: 7707281-1-BLK

Matrix: Solid

LCS Sample Id: 7707281-1-BKS

Prep Method: SW8015P

Date Prep: 07.13.2020

LCSD Sample Id: 7707281-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1170	117	1080	108	70-135	8	35	mg/kg	07.13.2020 14:46	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1100	110	70-135	10	35	mg/kg	07.13.2020 14:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		124		115		70-135	%	07.13.2020 14:46
o-Terphenyl	113		120		111		70-135	%	07.13.2020 14:46

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Matrix: Solid

MB Sample Id: 7707282-1-BLK

Prep Method: SW8015P

Date Prep: 07.13.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.13.2020 14:26	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

Matrix: Solid

MB Sample Id: 7707281-1-BLK

Prep Method: SW8015P

Date Prep: 07.13.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	07.13.2020 14:26	

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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.
BEU Hackberry 34 CTB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131538

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.13.2020

Parent Sample Id: 667017-002

MS Sample Id: 667017-002 S

MSD Sample Id: 667017-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1230	123	1070	107	70-135	14	35	mg/kg	07.13.2020 15:47	
Diesel Range Organics (DRO)	<50.2	1000	1200	120	1060	106	70-135	12	35	mg/kg	07.13.2020 15:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		100		70-135	%	07.13.2020 15:47
o-Terphenyl	85		75		70-135	%	07.13.2020 15:47

Analytical Method: TPH by SW8015 Mod

Seq Number: 3131564

Matrix: Soil

Prep Method: SW8015P

Date Prep: 07.13.2020

Parent Sample Id: 666865-013

MS Sample Id: 666865-013 S

MSD Sample Id: 666865-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1340	134	1320	132	70-135	2	35	mg/kg	07.13.2020 15:47	
Diesel Range Organics (DRO)	1450	1000	2550	110	2550	110	70-135	0	35	mg/kg	07.13.2020 15:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		133		70-135	%	07.13.2020 15:47
o-Terphenyl	107		105		70-135	%	07.13.2020 15:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131532

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.13.2020

MB Sample Id: 7707250-1-BLK

LCS Sample Id: 7707250-1-BKS

LCSD Sample Id: 7707250-1-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	0.0972	97	0.0955	96	70-130	2	35	mg/kg	07.13.2020 16:05	
Toluene	<0.00200	0.100	0.0947	95	0.0925	93	70-130	2	35	mg/kg	07.13.2020 16:05	
Ethylbenzene	<0.00200	0.100	0.102	102	0.0978	98	71-129	4	35	mg/kg	07.13.2020 16:05	
m,p-Xylenes	<0.00400	0.200	0.207	104	0.200	100	70-135	3	35	mg/kg	07.13.2020 16:05	
o-Xylene	<0.00200	0.100	0.102	102	0.0993	99	71-133	3	35	mg/kg	07.13.2020 16:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		98		70-130	%	07.13.2020 16:05
4-Bromofluorobenzene	102		100		97		70-130	%	07.13.2020 16:05

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.
BEU Hackberry 34 CTB

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131589

Matrix: Solid

Prep Method: SW5035A

Date Prep: 07.13.2020

MB Sample Id: 7707252-1-BLK

LCS Sample Id: 7707252-1-BKS

LCSD Sample Id: 7707252-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.119	119	70-130	4	35	mg/kg	07.13.2020 16:33	
Toluene	<0.00200	0.100	0.108	108	0.112	112	70-130	4	35	mg/kg	07.13.2020 16:33	
Ethylbenzene	<0.00200	0.100	0.101	101	0.105	105	71-129	4	35	mg/kg	07.13.2020 16:33	
m,p-Xylenes	<0.00400	0.200	0.205	103	0.212	106	70-135	3	35	mg/kg	07.13.2020 16:33	
o-Xylene	<0.00200	0.100	0.101	101	0.105	105	71-133	4	35	mg/kg	07.13.2020 16:33	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		100		70-130	%	07.13.2020 16:33
4-Bromofluorobenzene	93		102		103		70-130	%	07.13.2020 16:33

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131532

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.13.2020

Parent Sample Id: 667017-002

MS Sample Id: 667017-002 S

MSD Sample Id: 667017-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0101	0.505	0.526	104	0.461	91	70-130	13	35	mg/kg	07.13.2020 16:45	
Toluene	<0.0101	0.505	0.499	99	0.447	89	70-130	11	35	mg/kg	07.13.2020 16:45	
Ethylbenzene	<0.0101	0.505	0.517	102	0.463	92	71-129	11	35	mg/kg	07.13.2020 16:45	
m,p-Xylenes	<0.0202	1.01	1.05	104	0.927	92	70-135	12	35	mg/kg	07.13.2020 16:45	
o-Xylene	<0.0101	0.505	0.517	102	0.468	93	71-133	10	35	mg/kg	07.13.2020 16:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		70-130	%	07.13.2020 16:45
4-Bromofluorobenzene	101		97		70-130	%	07.13.2020 16:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3131589

Matrix: Soil

Prep Method: SW5035A

Date Prep: 07.13.2020

Parent Sample Id: 667021-019

MS Sample Id: 667021-019 S

MSD Sample Id: 667021-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.114	114	0.111	111	70-130	3	35	mg/kg	07.13.2020 17:16	
Toluene	<0.00200	0.100	0.108	108	0.105	105	70-130	3	35	mg/kg	07.13.2020 17:16	
Ethylbenzene	<0.00200	0.100	0.0986	99	0.0976	98	71-129	1	35	mg/kg	07.13.2020 17:16	
m,p-Xylenes	<0.00400	0.200	0.199	100	0.198	99	70-135	1	35	mg/kg	07.13.2020 17:16	
o-Xylene	<0.00200	0.100	0.0975	98	0.0982	98	71-133	1	35	mg/kg	07.13.2020 17:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	07.13.2020 17:16
4-Bromofluorobenzene	105		103		70-130	%	07.13.2020 17:16

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

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

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Page 1 of 2

Work Order No: 467021

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3144 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Corsado, NM 88220
Phone:	(432) 894-5641	Email:	jhernandez@xenco.com

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

Project Name:	BEV Hoelberry 34 CTB	Turn Around	
Project Number:	012920063	Routine	☒
Project Location:	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	MRM00853497	Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	10.0.8			Thermometer ID	TMM007	
Received In tact:	Yes	No			Correction Factor:	-0.2
Cooler Custody Seals:	Yes	No			Total Containers:	20
Sample Custody Seals:	Yes	No				

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
FS01		S	7/13/20	1035	2'	1	TPH (EPA 8015)		
FS02		S		1040		1	BTEX (EPA 8021)		
FS03		S		1045		1	Chloride (EPA 3000)		
FS04		S		1050		1			
FS05		S		1055		1			
FS06		S		1025		1			
FS07		S		1020		1			
FS08		S		1015		1			
FS09		S		1010		1			
FS10		S		1005		1			

Total 200.7 / 6010 200.8 / 6020:

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

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

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
Anna Byers		7/13/20 12:50			



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Crashpad, NM (432) 704-5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

Work Order No: 1667021

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Page 2 of 2

Project Manager:	Joseph Hernandez	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental	Company Name:	XTC Energy
Address:	3300 North A Street	Address:	3104 E. Greene Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 894-5641	Email:	jhernandez@lta.com

Project Name:	BEU Hackberry 34 CTB	Turn Around	
Project Number:	012920063	Routine	☒
Project Location:	Rural Eddy County	Rush:	
Sampler's Name:	Ana Byers	Due Date:	
PO #:	NRM20053797	Quote #:	

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

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST	Preservative Codes	Sample Comments
FS11		S	7/13/20	1000	2'	1	TPH (EPA 8015)	MeOH: Me	composite
SW03		S		1110	0-2'	1	BTEX (EPA 8021)	None: NO	composite
SW04		S		1114	0.5'	1	Chloride (EPA 300.0)	HNO3: HN	discrete
SW05		S		1115	1'	1		H2SO4: H2	discrete
SW06		S		1127	2'	1		HCL: HL	discrete
SW07		S		1128	0.5'	1		NaOH: Na	discrete
SW08		S		1130	1'	1		Zn Acetate+ NaOH: Zn	discrete
SW01		S	7/9/20	1545	0-2'	1			composite
SW02		S	7/9/20	1550	0-2'	1			composite
SW09		S	7/13/20	1117	0.5'	1			discrete

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn

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
Ana Byers		7/13/20 12:50			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07.13.2020 12.50.00 PM

Work Order #: 667021

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)?	.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#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

Samples received in bulk containers.

*** 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: 07.13.2020

Checklist reviewed by:



Jessica Kramer

Date: 07.15.2020

Incident ID	NRM2010853797
District RP	
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature: _____ Date: _____
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Robert Hamlet Date: 3/17/2021

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: Robert Hamlet Date: 3/17/2021

District I

1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 10403

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	10403	C-141

OCD Reviewer	Condition
rhamlet	XTO's deferral requests to complete final remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. The areas requested for deferral are identified on the site map as "SW03", "SW04", "SW05", "SW08", and "SW09". The areas have been delineated and documented in the report. At this time, OCD approves this request.