A proud member of WSP

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

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

RE: Closure Request Resubmittal
WPX Energy Permian, LLC.
Ross Draw Unit 11
Remediation Permit Number
Incident ID NRM1931859826
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC. (WPX), presents the following revised Closure Request referencing soil sampling and excavation activities the Ross Draw Unit 11 (Site), which was assigned Remediation Permit (RP) Number 2RP-5698 and Incident ID NRM1931859826.

Revisions

On April 16, 2020, WPX was notified of the denial associated with the aforementioned Closure Request. The New Mexico Oil Conservation Division found that the request required additional clarification for review.

The revised repot addresses:

- Two sidewall samples don't meet the closure criteria for this site. Sample SW04* is over the limit for TPH and BTEX. Sample SW08* is over the limit for TPH.

  > *"Discrete soil sample SW04 was effectively replaced by floor samples FS01 and FS04A once the soil support pillar was removed. Sidewall sample SW08 was replaced by SW10 to confirm removal of identified TPH impacts."*

- The irrelevant RDU 38 information and Chain of Custody observed in the report has been removed and/or corrected.

A proud member of WSP

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

April 17, 2020

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

RE: Closure Request
WPX Energy Permian, LLC.
Ross Draw Unit 11
Remediation Permit Number 2RP-5698
Incident ID NRM1931859826
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC. (WPX), presents the following Closure Request detailing soil sampling and excavation activities at the Ross Draw Unit 11 (Site) in Unit O, Section 22, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil following an event that resulted in the release of produced water and crude oil to the unlined earthen berm containment. Based on the excavation activities and results of the soil sampling events, WPX requests no further action (NFA).

BACKGROUND

On October 10, 2019, a failed flowline resulted in the release of 5 barrels (bbls) of produced water and 15 bbls of crude oil to the unlined treater containment. Released liquids were restricted to the unlined containment by the surrounding earthen berm and remained in the southern area of the unlined containment. Vacuum trucks were dispatched and recovered 3 bbls of produced water and 5 bbls of crude oil. The spill volume was calculated by averaging the saturated soil depth and estimating the percentage of liquids based on soil type. Any freestanding liquids were added to the total volume. The average saturation depth of the soil was observed to be 0.5 feet to 1 foot within the release extent and 8 bbls of production fluids were recovered. The soil type was determined to be sand, which was estimated to have an available space (i.e. porosity) of 40 percent (%) total volume. Based on these assumptions, the following equation was used to calculate total volume:

"saturated soil volume (cubic feet) x (4.21 cubic feet per bbl of liquid) x estimated soil porosity (%)"

WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) and was assigned Remediation Permit (RP) Number 2RP-5698 and Incident ID NRM1931859826 (Attachment 1).

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 known aquifer properties and the elevation difference between the Site and an identified groundwater well. The nearest permitted groundwater well with depth to groundwater data is United States Geological Survey (USGS) groundwater well 320125103514701, located approximately 1,140 ft east-northeast of the Site. Groundwater well 320125103514701 has a reported depth to groundwater of 117 feet bgs and is approximately 12 feet higher in elevation than the Site. The closest significant watercourse to the Site is an unnamed stream located approximately 2,570 feet south-southwest of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland, and greater than 1,000 feet to a freshwater well or spring. The Site is not within a 100-year floodplain or overlying a subsurface mine and is overlying an unstable area. The Site is located in a high potential karst area.

Based on these criteria, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Total benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

PRELIMINARY SOIL SAMPLING

On October 10, 2019, LTE personnel inspected the Site to evaluate the release extent. The release extent was mapped using a handheld Global Positioning System (GPS) unit and is shown on Figure2. LTE personnel collected one surface soil sample (SS01) within the release extent from a depth of approximately 0.5 feet bgs to assess soil impacts. The soil sample was placed directly into a pre- cleaned glass jar, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil sample was shipped at or below 4 degrees Celsius (°C), under strict chain-of-custody (COC) procedures, to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

On October 18, 2019, LTE personnel returned to the Site to further assess the vertical impacts within the release extent. LTE personnel advanced one pothole (PH01) to a depth of 4 feet bgs. Field screening was conducted every foot for volatile aromatic hydrocarbons using a photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Two soil samples were collected from pothole PH01 (the most impacted sample based on field screening results and the terminus of the pothole). Soil samples were collected, handled, and analyzed as previously described. Based on visible surface staining and laboratory analytical results of preliminary soil samples, excavation of impacted soil was warranted. Photographic documentation was conducted during the Site visit. Photographic logs are included in Attachment 2, lithologic/soil sampling logs are included in Attachment 3, and sample locations are depicted in Figure 2.

EXCAVATION SOIL SAMPLING

From October 21, 2019 through January 10, 2020, LTE was on site to oversee excavation activities within the release extent. The excavation occurred within the earthen berm in two main areas: along the southern earthen berm and to the east of the horizontal separator. Excavation activities were directed by field screening soil samples for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. Sidewall samples (SW04 through SW06) represented discrete samples collected from soil support pillars intended to be left in place to provide surface flowline and aboveground equipment stability. The pillars were excavated following the removal of the lines and equipment coordinated by WPX. Final composite floor samples (FS01 through FS08) were collected to confirm impacted soil removal and compliance with NMOCD Closure Criteria. Discrete soil sample SW04 was effectively replaced by floor samples FS01 and FS04A once the soil support pillar was removed. Sidewall sample SW08 was replaced by SW10 to confirm removal of identified TPH impacts.

Following completion of excavation activities, 5-point composite confirmation soil samples were collected from the floor (samples labeled as FS) and sidewalls (samples labeled as SW) of the excavation area. Each soil sample represented at most 200 square feet. Approximately 170 cubic yards of impacted soil were removed from the excavation area and transported to the R360 Red Bluff Facility in Orla, Texas for disposal. The excavation areas measured a total of approximately 920 square feet in area and ranged in depth from 0.5 feet bgs to 5 feet bgs. Soil confirmation samples were collected, handled, and analyzed as previously described. The excavation area and soil sample locations are depicted on Figure 3. Photographic documentation was conducted during the Site visit. Photographs are included in Attachment 2.

ANALYTICAL RESULTS

Laboratory analytical results of all final excavation confirmation soil samples indicate compliance with the Closure Criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4. The COC provided for soil

sample FS04 on the attached laboratory analytical report number 647461 indicates the data corresponds to an XTO Energy project. This was an oversight of field staff using an incorrect COC template containing XTO contact information. However, as documented in the Project Information section on the same COC, this sample was submitted for WPX's RDU 11 project corresponding to 2RP-5698.

CONCLUSIONS

A total of approximately 170 cubic yards of impacted soil were excavated from the Site. Laboratory analytical results of final excavation confirmation soil samples indicate compliance with Closure Criteria. WPX is requesting NFA of 2RP-5698 and Incident ID NRM1931859826. Upon approval of this closure request, WPX will backfill the excavation with material purchased locally and recontour the Site to match pre-existing Site conditions. An updated NMOCD Form C- 141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Anna Byers
Staff Geologist

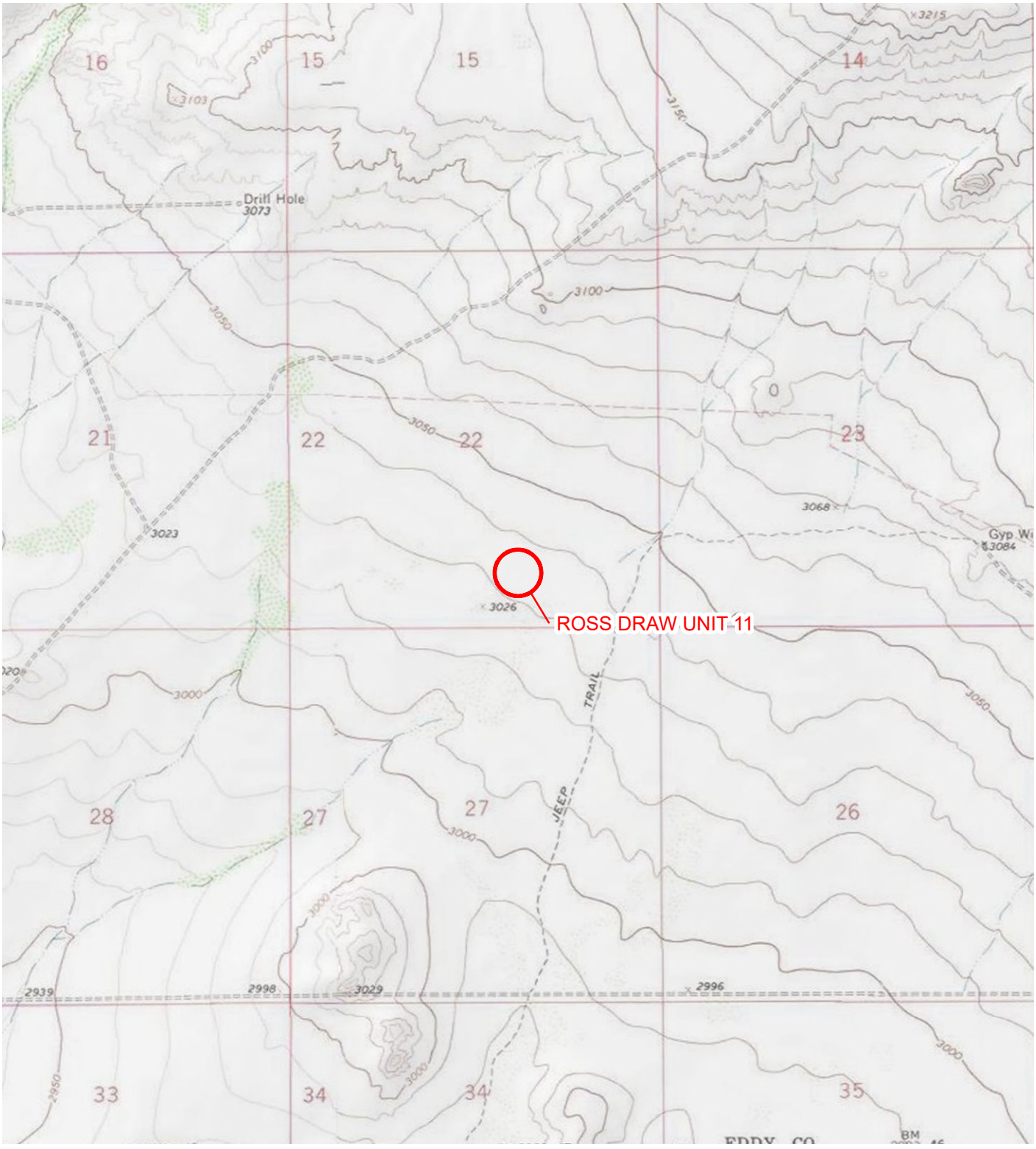
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jim Raley, WPX
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD
Jim Amos, BLM

Appendices:

Figure 1	Site Location Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Form C-141
Attachment 2	Photographic Log
Attachment 3	Lithologic/Soil Sampling Logs
Attachment 4	Laboratory Analytical Reports

FIGURES



LEGEND

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
ROSS DRAW UNIT 11
UNIT O SEC 22 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034819071_RDU 11\034819071_FIG01_SL_2019.mxd

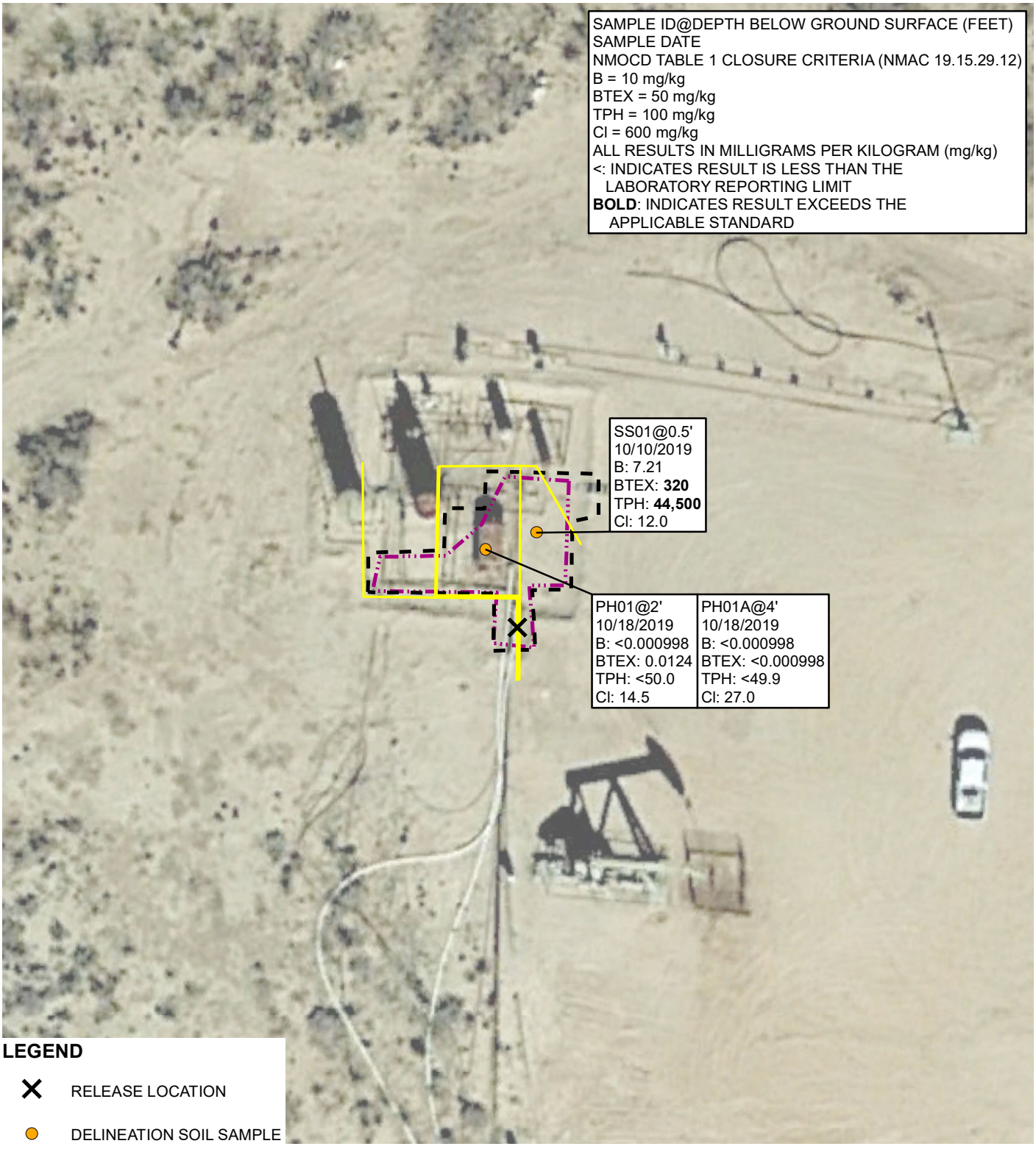
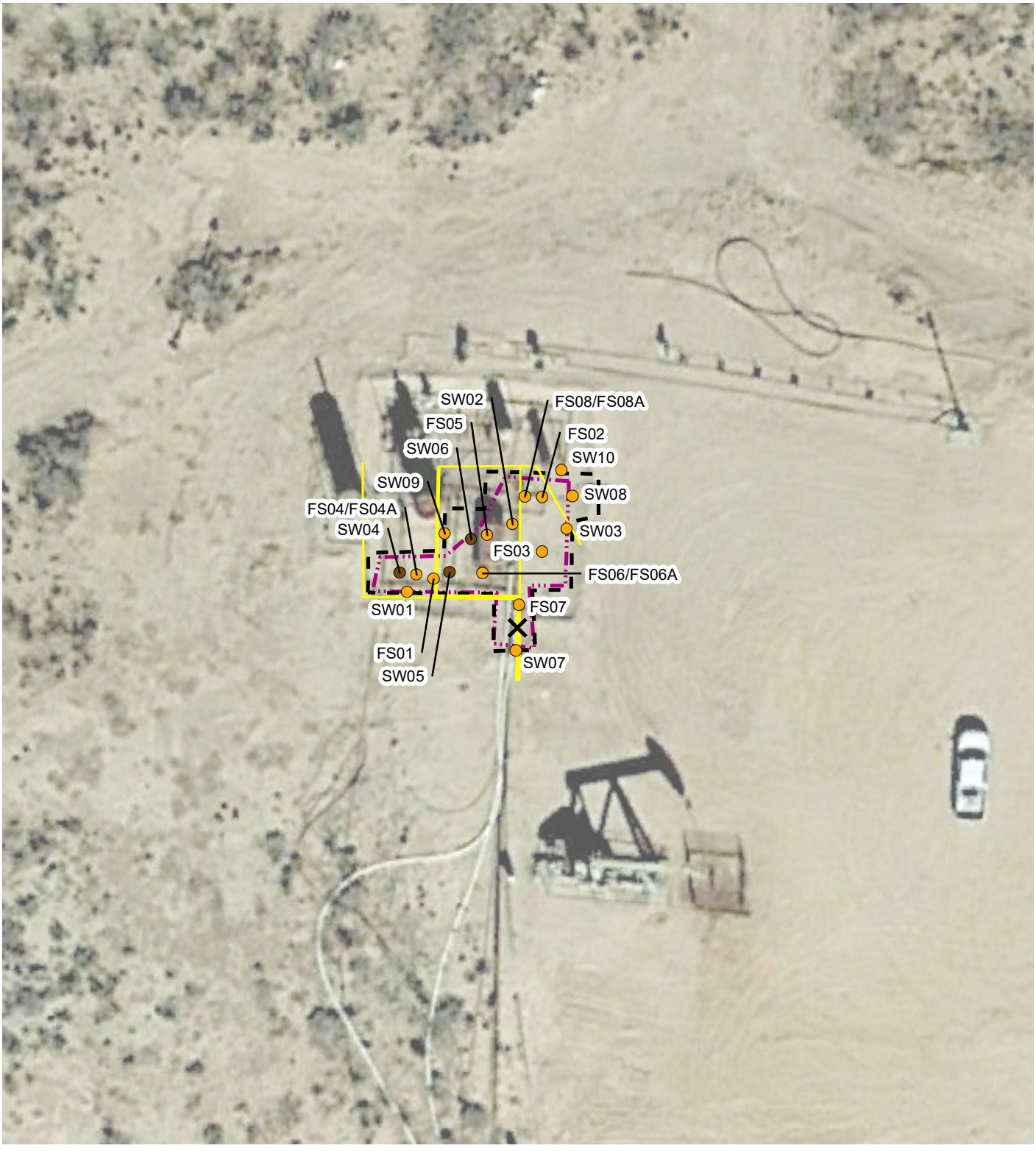


FIGURE 2
DELINEATION SOIL SAMPLE LOCATIONS
ROSS DRAW UNIT 11
UNIT O SEC 22 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034819071_RDU 11\034819071_FIG02_DELINEATION_2019.mxd



LEGEND

- RELEASE LOCATION
- DISCRETE EXCAVATION SOIL SAMPLE
- COMPOSITE EXCAVATION SOIL SAMPLE
- RELEASE EXTENT (685.05 SQUARE FEET)
- EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2019

0 30 60
Feet

N

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
ROSS DRAW UNIT 11
UNIT O SEC 22 T26S R30E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034819071_RDU 11\034819071_FIG03_EXCAVATION_2019.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS

ROSS DRAW UNIT 11
REMEDIATION PERMIT NUMBER 2RP-5698
EDDY COUNTY, NEW MEXICO
WPX 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)	MRO (mg/kg)	Sum of GRO + DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	10/10/2019	7.21	77.3	52.4	183	**320**	14700	27,400	2390	42,100	**44,500**	12
PH01	2	10/18/2019	<0.000998	0.00106	0.00181	0.00957	0.0124	<50.0	<50.0	<50.0	<50.0	<50.0	15
PH01A	4	10/18/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.9	<49.9	<49.9	<49.9	<49.9	27
FS01	2 - 4	12/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	64.4
FS02	4	12/16/2019	<0.00199	<0.00199	0.0158	0.0486	0.0644	<50.1	215	<50.1	215	**215**	199
FS03	4	12/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	31.6
FS04	1.5 - 4	12/24/2019	<0.0217	<0.0217	<0.0217	<0.0217	<0.0217	<49.9	164	<49.9	164	**164**	17.9
FS04A	4	01/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	<50.0	<50.0	<50.0	<50.0	16.5
FS05	4	01/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	39.6
FS06	4	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	87.1	<49.9	87.1	87.1	**782**
FS06A	4.5	01/14/2020	<0.00199	<0.00199	<0.00199	0.00240	0.00240	<50.2	<50.2	<50.2	<50.2	<50.2	122
FS07	4 - 5	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	256
FS08	4.5	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	**660**
FS08A	5	01/14/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	193
SW01	0.5 - 4	12/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	10.6
SW02	0.5 - 4	12/16/2019	0.146	4.95	8.82	28.2	42.1	1270	4620	466	5890	**6360**	23.3
SW03	0.5 - 4	12/16/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	**607**
SW04*	1	12/16/2019	0.121	5.92	11.3	35.9	**53.2**	3960	20500	1860	24500	**26300**	49.3
SW05*	0.5	12/16/2019	0.111	5.52	9.49	31.5	46.6	3100	18700	1600	21800	**23400**	<9.98
SW06*	1	12/16/2019	0.631	17.6	18.6	75.6	**112**	5480	38000	3970	43500	**47500**	77.6
SW07	0.5 - 5	01/08/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	151
SW08	0.5 - 4.5	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	**866**
SW09	0.5 - 4	01/08/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	19.4
SW10	0 - 5	01/14/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	228
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

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

ATTACHMENT 1: FORM C-141

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	NRM1931859826
District RP	2RP-5698
Facility ID	
Application ID	pRM1931859914

Release Notification AT7UR-191014-C-1410

Responsible Party

Responsible Party: WPX Energy Permian, LLC.	OGRID: 246289
Contact Name: Jim Raley	Contact Telephone: 575-689-7597
Contact email: james.raley@wpxenergy.com	Incident # *(assigned by OCD)*
Contact mailing address: 5315 Buena Vista Dr., Carlsbad, NM 88220	

Location of Release Source

Latitude 32.02114 Longitude -103.86714
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: RDU 11	Site Type: Production Facility
Date Release Discovered: 10/10/2019	API# *(if applicable): 30-015-24307*

Unit Letter	Section	Township	Range	County
O	22	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private

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)15	Volume Recovered (bbls) 5
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 3
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release: Failure of flowline allowed 20 bbls (15 oil/5 PW) fluids to be released to unlined secondary treater containment.		

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM1931859826
District RP	2RP-5698
Facility ID	
Application ID	pRM1931859914

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 not been undertaken, explain why:

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

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

Printed Name: Jim Raley
Title: Environmental Specialist

Signature: Jim Raley
Date: 10/14/2019

email: james.raley@wpxenergy.com
Telephone: 575-689-7597

OCD Only

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

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	**NRM1931859826**
District RP	2RP-5698
Facility ID	
Application ID	pRM1931859914

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: **Jim Raley** Title: **Environmental Specialist**

Signature:_____ Date: **3/4/2020**

email: **James.Raley@wpxenergy.com** Telephone: **575-689-7597**

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	**NRM1931859826**
District RP	2RP-5698
Facility ID	
Application ID	pRM1931859914

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: **Jim Raley** Title: **Environmental Specialist**

Signature: _____ Date: **3/4/2020**

email: **James.Raley@wpxenergy.com** Telephone: **575-689-7597**

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: PHOTOGRAPHIC LOG

Northern view of the release extent.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	LTE Advancing Opportunity
October 10, 2020	Photographic Log	

Northwestern view of release extent.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	LTE Advancing Opportunity
October 10, 2020	Photographic Log	

s

Eastern view of the excavation prior to equipment and surface line removal.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	Advancing Opportunity
December 10, 2020	Photographic Log	

Western view of the excavation area post surface line and equipment removal.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	LTE Advancing Opportunity
January 10, 2020	Photographic Log	

Southern view of the excavation area post equipment and line removal.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	Advancing Opportunity
January 10, 2020	Photographic Log	

Northern view of the excavation area post equipment and line removal.

Project: 034819059	WPX Energy Permian, Inc. Ross Draw Unit 11	Advancing Opportunity
January 10, 2020	Photographic Log	

ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

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

Identifier:	Date:
PH01	10/18/19
Project Name:	**RP Number:**
Ross Draw Unit 11	2RP-5698

LITHOLOGIC / SOIL SAMPLING LOG

Logged By:	Method:
Lynda Laumbach	Hand Shovel

Lat/Long:	Field Screening:	Hole Diameter:	Total Depth:
32.02271002, -103.8670561 7	—	N/A	4'

Comments: Chloride and vapor values reported were analyzed by the lab.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	15	<50	Y	PH01	2	2'	SM	brown silty sand (m.) poorly-graded, low plasticity, odor
M	27	<50	N	PH01A	4	4'	SM	brown silty sand (m.), poorly graded low plasticity, no odor
								TOT DEPTH

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 639781

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 11

10/10/2019

16-OCT-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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-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)

16-OCT-19

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

Reference: XENCO Report No(s): **639781**
RDU 11
Project Address: Eddy County, NM

Chris McKisson:

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) 639781. 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. 639781 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 639781

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-10-19 15:45	0.5 ft	639781-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDU 11

Project ID: *10/10/2019*
Work Order Number(s): *639781*

Report Date: *16-OCT-19*
Date Received: *10/11/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104254 Chloride by EPA 300
Lab Sample ID 639787-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 639781-001.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3104378 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 639781-001.

Batch: LBA-3104433 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 639781

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 10/10/2019
Contact: Chris McKisson
Project Location: Eddy County, NM

Date Received in Lab: Fri Oct-11-19 12:35 pm
Report Date: 16-OCT-19
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	639781-001						
	Field Id:	SS01						
	Depth:	0.5- ft						
	Matrix:	SOIL						
	Sampled:	Oct-10-19 15:45						
BTEX by EPA 8021B	***Extracted:***	Oct-14-19 16:10						
	Analyzed:	Oct-15-19 15:55						
	Units/RL:	mg/kg	RL					
Benzene		7.21	0.501					
Toluene		77.3	0.501					
Ethylbenzene		52.4	0.501					
m,p-Xylenes		131	1.00					
o-Xylene		51.9	0.501					
Total Xylenes		183	0.501					
Total BTEX		320	0.501					
Chloride by EPA 300	***Extracted:***	Oct-14-19 12:00						
	Analyzed:	Oct-14-19 14:47						
	Units/RL:	mg/kg	RL					
Chloride		12.0	9.94					
TPH by SW8015 Mod	***Extracted:***	Oct-14-19 11:00						
	Analyzed:	Oct-14-19 22:30						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		14700	250					
Diesel Range Organics (DRO)		27400	250					
Motor Oil Range Hydrocarbons (MRO)		2390	250					
Total TPH		44500	250					
Total GRO-DRO		42100	250					

Jessica Kramer
Project Assistant

Certificate of Analytical Results 639781

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.11.19 12.35
Lab Sample Id:	639781-001	Date Collected:	10.10.19 15.45	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.14.19 12.00	Basis:	Wet Weight
Seq Number:	3104254				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.0**	9.94	mg/kg	10.14.19 14.47		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.14.19 11.00	Basis:	Wet Weight
Seq Number:	3104378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**14700**	250	mg/kg	10.14.19 22.30		10
Diesel Range Organics (DRO)	C10C28DRO	**27400**	250	mg/kg	10.14.19 22.30		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**2390**	250	mg/kg	10.14.19 22.30		10
Total TPH	PHC635	**44500**	250	mg/kg	10.14.19 22.30		10
Total GRO-DRO	PHC628	**42100**	250	mg/kg	10.14.19 22.30		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	518	%	70-135	10.14.19 22.30	**
o-Terphenyl	84-15-1	353	%	70-135	10.14.19 22.30	**

Certificate of Analytical Results 639781

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.11.19 12.35
Lab Sample Id:	639781-001	Date Collected:	10.10.19 15.45	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.14.19 16.10	Basis:	Wet Weight
Seq Number:	3104433				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**7.21**	0.501	mg/kg	10.15.19 15.55		500
Toluene	108-88-3	**77.3**	0.501	mg/kg	10.15.19 15.55		500
Ethylbenzene	100-41-4	**52.4**	0.501	mg/kg	10.15.19 15.55		500
m,p-Xylenes	179601-23-1	**131**	1.00	mg/kg	10.15.19 15.55		500
o-Xylene	95-47-6	**51.9**	0.501	mg/kg	10.15.19 15.55		500
Total Xylenes	1330-20-7	**183**	0.501	mg/kg	10.15.19 15.55		500
Total BTEX		**320**	0.501	mg/kg	10.15.19 15.55		500

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	10.15.19 15.55	
4-Bromofluorobenzene	460-00-4	97	%	70-130	10.15.19 15.55	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 639781

LT Environmental, Inc.

RDU 11

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104254 — Matrix: Solid — Date Prep: 10.14.19
MB Sample Id: 7688096-1-BLK — LCS Sample Id: 7688096-1-BKS — LCSD Sample Id: 7688096-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.19	300	299	100	302	101	90-110	1	20	mg/kg	10.14.19 14:32	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104254 — Matrix: Soil — Date Prep: 10.14.19
Parent Sample Id: 639781-001 — MS Sample Id: 639781-001 S — MSD Sample Id: 639781-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.0	198	242	116	265	128	90-110	9	20	mg/kg	10.14.19 14:54	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3104254 — Matrix: Soil — Date Prep: 10.14.19
Parent Sample Id: 639787-008 — MS Sample Id: 639787-008 S — MSD Sample Id: 639787-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.51	199	239	117	242	119	90-110	1	20	mg/kg	10.14.19 16:41	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104378 — Matrix: Solid — Date Prep: 10.14.19
MB Sample Id: 7688111-1-BLK — LCS Sample Id: 7688111-1-BKS — LCSD Sample Id: 7688111-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<25.0	1000	818	82	829	83	70-135	1	35	mg/kg	10.14.19 20:50	
Diesel Range Organics (DRO)	<25.0	1000	739	74	760	76	70-135	3	35	mg/kg	10.14.19 20:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		104		96		70-135	%	10.14.19 20:50
o-Terphenyl	85		93		94		70-135	%	10.14.19 20:50

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104378 — Matrix: Solid — Date Prep: 10.14.19
MB Sample Id: 7688111-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<25.0	mg/kg	10.14.19 20:30	

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

QC Summary 639781

LT Environmental, Inc.

RDU 11

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104378 Matrix: Soil Date Prep: 10.14.19
Parent Sample Id: 639765-001 MS Sample Id: 639765-001 S MSD Sample Id: 639765-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<25.0	1000	990	99	978	98	70-135	1	35	mg/kg	10.14.19 21:50	
Diesel Range Organics (DRO)	<25.0	1000	854	85	822	83	70-135	4	35	mg/kg	10.14.19 21:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		110		70-135	%	10.14.19 21:50
o-Terphenyl	100		96		70-135	%	10.14.19 21:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3104433 Matrix: Solid Date Prep: 10.14.19
MB Sample Id: 7688180-1-BLK LCS Sample Id: 7688180-1-BKS LCSD Sample Id: 7688180-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0972	97	0.0934	93	70-130	4	35	mg/kg	10.14.19 19:43	
Toluene	<0.00100	0.100	0.0942	94	0.0933	93	70-130	1	35	mg/kg	10.14.19 19:43	
Ethylbenzene	<0.00100	0.100	0.0940	94	0.0941	94	71-129	0	35	mg/kg	10.14.19 19:43	
m,p-Xylenes	<0.00200	0.200	0.199	100	0.199	100	70-135	0	35	mg/kg	10.14.19 19:43	
o-Xylene	<0.00100	0.100	0.0965	97	0.0968	97	71-133	0	35	mg/kg	10.14.19 19:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		103		100		70-130	%	10.14.19 19:43
4-Bromofluorobenzene	98		104		108		70-130	%	10.14.19 19:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3104433 Matrix: Soil Date Prep: 10.14.19
Parent Sample Id: 639785-001 MS Sample Id: 639785-001 S MSD Sample Id: 639785-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0971	97	0.0863	86	70-130	12	35	mg/kg	10.14.19 20:21	
Toluene	<0.00100	0.100	0.0942	94	0.0835	84	70-130	12	35	mg/kg	10.14.19 20:21	
Ethylbenzene	<0.00100	0.100	0.0940	94	0.0820	82	71-129	14	35	mg/kg	10.14.19 20:21	
m,p-Xylenes	<0.00200	0.200	0.199	100	0.173	87	70-135	14	35	mg/kg	10.14.19 20:21	
o-Xylene	<0.00100	0.100	0.0996	100	0.0864	86	71-133	14	35	mg/kg	10.14.19 20:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	10.14.19 20:21
4-Bromofluorobenzene	120		119		70-130	%	10.14.19 20:21

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

Chain of Custody

Work Order No: 639781

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970) 285-9985	Email:	llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

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

Project Name:	RDU 11	Turn Around	
Project Number:	10/10/2019	Routine	X
P.O. Number:	Eddy County, NM/ Task #002	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	1.2	Thermometer ID		
Received Intact:	Yes No	T-NM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	10/10/19	15:45	0.5'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

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	10/10/2019 10:00	2 Anna Byers	10.11 12:35	
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/11/2019 12:35:00 PM

Work Order #: 639781

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 10/11/2019

Checklist reviewed by: Jessica Kramer Date: 10/13/2019

Jessica Kramer

Analytical Report 640498

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 11

034819071

24-OCT-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

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-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)

24-OCT-19

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

Reference: XENCO Report No(s): **640498**
RDU 11
Project Address: Eddy County, NM/ Task #002

Chris McKisson:

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) 640498. 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. 640498 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 640498

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	10-18-19 13:00	2 ft	640498-001
PH01A	S	10-18-19 13:10	4 ft	640498-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDU 11

Project ID: *034819071*
Work Order Number(s): *640498*

Report Date: *24-OCT-19*
Date Received: *10/21/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105180 BTEX by EPA 8021B

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

Certificate of Analysis Summary 640498

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Eddy County, NM/ Task #002

Date Received in Lab: Mon Oct-21-19 09:10 am
Report Date: 24-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	640498-001		640498-002									
	Field Id:	PH01		PH01A									
	Depth:	2- ft		4- ft									
	Matrix:	SOIL		SOIL									
	Sampled:	Oct-18-19 13:00		Oct-18-19 13:10									
BTEX by EPA 8021B	***Extracted:***	Oct-22-19 15:10		Oct-22-19 15:10									
	Analyzed:	Oct-22-19 20:21		Oct-22-19 20:41									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Benzene		<0.000998	0.000998	<0.000998	0.000998								
Toluene		0.00106	0.000998	<0.000998	0.000998								
Ethylbenzene		0.00181	0.000998	<0.000998	0.000998								
m,p-Xylenes		0.00311	0.00200	<0.00200	0.00200								
o-Xylene		0.00646	0.000998	<0.000998	0.000998								
Total Xylenes		0.00957	0.000998	<0.000998	0.000998								
Total BTEX		0.0124	0.000998	<0.000998	0.000998								
Chloride by EPA 300	***Extracted:***	Oct-21-19 20:10		Oct-21-19 20:10									
	Analyzed:	Oct-22-19 15:19		Oct-22-19 15:26									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		14.5	10.0	27.0	10.1								
TPH by SW8015 Mod	***Extracted:***	Oct-21-19 14:10		Oct-21-19 16:00									
	Analyzed:	Oct-21-19 18:10		Oct-21-19 18:50									
	Units/RL:	mg/kg	RL	mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<49.9	49.9								
Diesel Range Organics (DRO)		<50.0	50.0	<49.9	49.9								
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9								
Total TPH		<50.0	50.0	<49.9	49.9								
Total GRO-DRO		<50.0	50.0	<49.9	49.9								

Jessica Kramer
Project Assistant

Certificate of Analytical Results 640498

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	10.21.19 09.10
Lab Sample Id:	640498-001	Date Collected:	10.18.19 13.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.21.19 20.10	Basis:	Wet Weight
Seq Number:	3105170				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.5**	10.0	mg/kg	10.22.19 15.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.21.19 14.10	Basis:	Wet Weight
Seq Number:	3104972				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.21.19 18.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.21.19 18.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.21.19 18.10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.21.19 18.10	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.21.19 18.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	10.21.19 18.10	
o-Terphenyl	84-15-1	89	%	70-135	10.21.19 18.10	

Certificate of Analytical Results 640498

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	10.21.19 09.10
Lab Sample Id:	640498-001	Date Collected:	10.18.19 13.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.22.19 15.10	Basis:	Wet Weight
Seq Number:	3105180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	10.22.19 20.21	U	1
Toluene	108-88-3	**0.00106**	0.000998	mg/kg	10.22.19 20.21		1
Ethylbenzene	100-41-4	**0.00181**	0.000998	mg/kg	10.22.19 20.21		1
m,p-Xylenes	179601-23-1	**0.00311**	0.00200	mg/kg	10.22.19 20.21		1
o-Xylene	95-47-6	**0.00646**	0.000998	mg/kg	10.22.19 20.21		1
Total Xylenes	1330-20-7	**0.00957**	0.000998	mg/kg	10.22.19 20.21		1
Total BTEX		**0.0124**	0.000998	mg/kg	10.22.19 20.21		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	10.22.19 20.21	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.22.19 20.21	

Certificate of Analytical Results 640498

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	10.21.19 09.10
Lab Sample Id:	640498-002	Date Collected:	10.18.19 13.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.21.19 20.10	Basis:	Wet Weight
Seq Number:	3105170				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**27.0**	10.1	mg/kg	10.22.19 15.26		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	10.21.19 16.00	Basis:	Wet Weight
Seq Number:	3104978				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.21.19 18.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.21.19 18.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.21.19 18.50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.21.19 18.50	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.21.19 18.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	72	%	70-135	10.21.19 18.50	
o-Terphenyl	84-15-1	71	%	70-135	10.21.19 18.50	

Certificate of Analytical Results 640498

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	10.21.19 09.10
Lab Sample Id:	640498-002	Date Collected:	10.18.19 13.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	10.22.19 15.10	Basis:	Wet Weight
Seq Number:	3105180				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.22.19 20.41	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1
Total BTEX		<0.000998	0.000998	mg/kg	10.22.19 20.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	10.22.19 20.41	
1,4-Difluorobenzene	540-36-3	101	%	70-130	10.22.19 20.41	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 640498

LT Environmental, Inc.

RDU 11

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3105170 Matrix: Solid Date Prep: 10.21.19
MB Sample Id: 7688575-1-BLK LCS Sample Id: 7688575-1-BKS LCSD Sample Id: 7688575-1-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	268	107	269	108	90-110	0	20	mg/kg	10.22.19 14:04	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3105170 Matrix: Solid Date Prep: 10.21.19
Parent Sample Id: 640497-001 MS Sample Id: 640497-001 S MSD Sample Id: 640497-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	56.4	200	290	117	292	118	90-110	1	20	mg/kg	10.22.19 14:22	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3105170 Matrix: Solid Date Prep: 10.21.19
Parent Sample Id: 640502-004 MS Sample Id: 640502-004 S MSD Sample Id: 640502-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1640	1980	4150	127	4210	129	90-110	1	20	mg/kg	10.22.19 16:03	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104972 Matrix: Solid Date Prep: 10.21.19
MB Sample Id: 7688557-1-BLK LCS Sample Id: 7688557-1-BKS LCSD Sample Id: 7688557-1-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	937	94	938	94	70-135	0	35	mg/kg	10.21.19 14:12	
Diesel Range Organics (DRO)	<50.0	1000	828	83	862	86	70-135	4	35	mg/kg	10.21.19 14:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		113		113		70-135	%	10.21.19 14:12
o-Terphenyl	91		107		112		70-135	%	10.21.19 14:12

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

QC Summary 640498

LT Environmental, Inc.

RDU 11

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104978 — Matrix: Solid — Date Prep: 10.21.19
MB Sample Id: 7688582-1-BLK — LCS Sample Id: 7688582-1-BKS — LCSD Sample Id: 7688582-1-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	888	89	913	91	70-135	3	35	mg/kg	10.21.19 18:30	
Diesel Range Organics (DRO)	<50.0	1000	816	82	825	83	70-135	1	35	mg/kg	10.21.19 18:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	90		118		109		70-135	%	10.21.19 18:30
o-Terphenyl	94		112		106		70-135	%	10.21.19 18:30

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104972 — Matrix: Solid — Date Prep: 10.21.19
MB Sample Id: 7688557-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.21.19 13:52	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104978 — Matrix: Solid — Date Prep: 10.21.19
MB Sample Id: 7688582-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.21.19 18:30	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104972 — Matrix: Soil — Date Prep: 10.21.19
Parent Sample Id: 640495-003 — MS Sample Id: 640495-003 S — MSD Sample Id: 640495-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	886	89	846	85	70-135	5	35	mg/kg	10.21.19 14:32	
Diesel Range Organics (DRO)	<50.2	1000	809	81	765	77	70-135	6	35	mg/kg	10.21.19 14:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		85		70-135	%	10.21.19 14:32
o-Terphenyl	87		81		70-135	%	10.21.19 14:32

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

QC Summary 640498

LT Environmental, Inc.

RDU 11

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3104978 Matrix: Soil Date Prep: 10.21.19
Parent Sample Id: 640498-002 MS Sample Id: 640498-002 S MSD Sample Id: 640498-002 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)	<50.6	1010	852	84	866	86	70-135	2	35	mg/kg	10.21.19 19:09	
Diesel Range Organics (DRO)	<50.6	1010	774	77	799	79	70-135	3	35	mg/kg	10.21.19 19:09	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		100		70-135	%	10.21.19 19:09
o-Terphenyl	81		86		70-135	%	10.21.19 19:09

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3105180 Matrix: Solid Date Prep: 10.22.19
MB Sample Id: 7688753-1-BLK LCS Sample Id: 7688753-1-BKS LCSD Sample Id: 7688753-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0927	93	0.0921	92	70-130	1	35	mg/kg	10.22.19 17:03	
Toluene	<0.00100	0.100	0.0898	90	0.0891	89	70-130	1	35	mg/kg	10.22.19 17:03	
Ethylbenzene	<0.00100	0.100	0.0923	92	0.0913	91	71-129	1	35	mg/kg	10.22.19 17:03	
m,p-Xylenes	<0.00200	0.200	0.185	93	0.183	92	70-135	1	35	mg/kg	10.22.19 17:03	
o-Xylene	<0.00100	0.100	0.0922	92	0.0922	92	71-133	0	35	mg/kg	10.22.19 17:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		102		70-130	%	10.22.19 17:03
4-Bromofluorobenzene	107		104		108		70-130	%	10.22.19 17:03

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3105180 Matrix: Soil Date Prep: 10.22.19
Parent Sample Id: 640664-001 MS Sample Id: 640664-001 S MSD Sample Id: 640664-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000990	0.0990	0.0949	96	0.0951	95	70-130	0	35	mg/kg	10.22.19 17:44	
Toluene	<0.000990	0.0990	0.0912	92	0.0897	90	70-130	2	35	mg/kg	10.22.19 17:44	
Ethylbenzene	<0.000990	0.0990	0.0931	94	0.0905	91	71-129	3	35	mg/kg	10.22.19 17:44	
m,p-Xylenes	<0.00198	0.198	0.187	94	0.181	91	70-135	3	35	mg/kg	10.22.19 17:44	
o-Xylene	<0.000990	0.0990	0.0939	95	0.0915	92	71-133	3	35	mg/kg	10.22.19 17:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	10.22.19 17:44
4-Bromofluorobenzene	110		111		70-130	%	10.22.19 17:44

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: 640498

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970) 285-9985	Email:	llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

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

Project Name:	RDU 11	Turn Around	
Project Number:	034819071	Routine	X
P.O. Number:	Eddy County, NM/ Task #002	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.4	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	2

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	10/18/2019	12:00	2'	1	X	X	X
PH01A	S	10/18/2019	13:10	4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
	Cynthia Pena	10/18/2019 09:10	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/21/2019 09:10:00 AM

Work Order #: 640498

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**Yes**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#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: 10/21/2019

Checklist reviewed by: Jessica Kramer Date: 10/22/2019

Analytical Report 646590

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 11

034819071

18-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

18-DEC-19

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

Reference: XENCO Report No(s): **646590**
RDU 11
Project Address: Rural Eddy County

Chris McKisson:

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) 646590. 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. 646590 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 646590

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	12-16-19 11:45	2 - 4 ft	646590-001
FS02	S	12-16-19 11:55	4 ft	646590-002
FS03	S	12-16-19 11:57	4 ft	646590-003
SW01	S	12-16-19 11:50	0.5 - 4 ft	646590-004
SW02	S	12-16-19 12:00	0.5 - 4 ft	646590-005
SW03	S	12-16-19 12:02	0.5 - 4 ft	646590-006
SW04	S	12-16-19 12:05	1 ft	646590-007
SW05	S	12-16-19 12:07	0.5 ft	646590-008
SW06	S	12-16-19 12:10	1 ft	646590-009

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: RDU 11

Project ID: *034819071*
Work Order Number(s): *646590*

Report Date: *18-DEC-19*
Date Received: *12/17/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3110867 BTEX by EPA 8021B
Lab Sample ID 646590-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646590-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 646590-009.

Certificate of Analysis Summary 646590

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Tue Dec-17-19 10:45 am
Report Date: 18-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646590-001		646590-002		646590-003		646590-004		646590-005		646590-006	
	Field Id:	FS01		FS02		FS03		SW01		SW02		SW03	
	Depth:	2-4 ft		4- ft		4- ft		0.5-4 ft		0.5-4 ft		0.5-4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-16-19 11:45		Dec-16-19 11:55		Dec-16-19 11:57		Dec-16-19 11:50		Dec-16-19 12:00		Dec-16-19 12:02	
BTEX by EPA 8021B	***Extracted:***	Dec-17-19 14:55		Dec-17-19 14:55		Dec-17-19 14:55		Dec-17-19 14:55		Dec-17-19 14:55		Dec-17-19 14:55	
	Analyzed:	Dec-17-19 16:01		Dec-17-19 16:18		Dec-17-19 16:35		Dec-17-19 16:53		Dec-17-19 17:28		Dec-17-19 17:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	0.146	0.0992	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	4.95	0.0992	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	0.0158	0.00199	<0.00200	0.00200	<0.00200	0.00200	8.82	0.0992	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	0.0300	0.00398	<0.00401	0.00401	<0.00399	0.00399	17.9	0.198	<0.00399	0.00399
o-Xylene		<0.00200	0.00200	0.0186	0.00199	<0.00200	0.00200	<0.00200	0.00200	10.3	0.0992	<0.00200	0.00200
Xylenes, Total		<0.00200	0.00200	0.0486	0.00199	<0.00200	0.00200	<0.00200	0.00200	28.2	0.0992	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	0.0644	0.00199	<0.00200	0.00200	<0.00200	0.00200	42.1	0.0992	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Dec-17-19 15:29		Dec-17-19 15:29		Dec-17-19 15:29		Dec-17-19 15:29		Dec-17-19 15:29		Dec-17-19 15:29	
	Analyzed:	Dec-17-19 17:40		Dec-17-19 17:57		Dec-17-19 18:03		Dec-17-19 18:08		Dec-17-19 18:14		Dec-17-19 18:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		64.4	9.92	199	9.88	31.6	9.92	10.6	9.98	23.3	9.92	607	9.88
TPH by SW8015 Mod	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		Dec-17-19 15:00		Dec-17-19 15:00	
	Analyzed:	Dec-17-19 14:56		Dec-17-19 15:15		Dec-17-19 15:15		Dec-17-19 15:36		Dec-17-19 16:54		Dec-17-19 16:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.1	50.1	<50.1	50.1	<50.0	50.0	1270	50.2	<50.2	50.2
Diesel Range Organics (DRO)		<50.3	50.3	215	50.1	<50.1	50.1	<50.0	50.0	4620	50.2	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1	<50.1	50.1	<50.0	50.0	466	50.2	<50.2	50.2
Total GRO-DRO		<50.3	50.3	215	50.1	<50.1	50.1	<50.0	50.0	5890	50.2	<50.2	50.2
Total TPH		<50.3	50.3	215	50.1	<50.1	50.1	<50.0	50.0	6360	50.2	<50.2	50.2

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 646590

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Tue Dec-17-19 10:45 am
Report Date: 18-DEC-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	646590-007		646590-008		646590-009				
	Field Id:	SW04		SW05		SW06				
	Depth:	1- ft		0.5- ft		1- ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Dec-16-19 12:05		Dec-16-19 12:07		Dec-16-19 12:10				
BTEX by EPA 8021B	***Extracted:***	Dec-17-19 14:55		Dec-17-19 14:55		Dec-17-19 14:55				
	Analyzed:	Dec-17-19 17:45		Dec-17-19 18:02		Dec-17-19 18:20				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		0.121	0.100	0.111	0.100	0.631	0.200			
Toluene		5.92	0.200	5.52	0.201	17.6	0.200			
Ethylbenzene		11.3	0.200	9.49	0.201	18.6	0.200			
m,p-Xylenes		21.4	0.401	20.4	0.402	47.6	0.401			
o-Xylene		14.5	0.200	11.1	0.201	28.0	0.200			
Xylenes, Total		35.9	0.200	31.5	0.201	75.6	0.200			
Total BTEX		53.2	0.100	46.6	0.100	112	0.200			
Chloride by EPA 300	***Extracted:***	Dec-17-19 15:29		Dec-17-19 15:29		Dec-17-19 15:29				
	Analyzed:	Dec-17-19 18:38		Dec-17-19 18:44		Dec-17-19 18:51				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		49.3	9.90	<9.98	9.98	77.6	9.92			
TPH by SW8015 Mod	***Extracted:***	Dec-17-19 15:00		Dec-17-19 15:00		Dec-17-19 15:00				
	Analyzed:	Dec-17-19 16:54		Dec-17-19 17:34		Dec-18-19 08:59				
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		3960	251	3100	251	5480	502			
Diesel Range Organics (DRO)		20500	251	18700	251	38000	502			
Motor Oil Range Hydrocarbons (MRO)		1860	251	1600	251	3970	502			
Total GRO-DRO		24500	251	21800	251	43500	502			
Total TPH		26300	251	23400	251	47500	502			

Jessica Kramer
Project Assistant

Certificate of Analytical Results 646590

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-001	Date Collected:	12.16.19 11.45	Sample Depth:	2 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**64.4**	9.92	mg/kg	12.17.19 17.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 10.20	Basis:	Wet Weight
Seq Number:	3110839				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.17.19 14.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.17.19 14.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.17.19 14.56	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.17.19 14.56	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.17.19 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	12.17.19 14.56	
o-Terphenyl	84-15-1	84	%	70-135	12.17.19 14.56	

Certificate of Analytical Results 646590

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-001	Date Collected:	12.16.19 11.45	Sample Depth:	2 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.17.19 16.01	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.17.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.17.19 16.01	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.17.19 16.01	

Certificate of Analytical Results 646590

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-002	Date Collected:	12.16.19 11.55	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**199**	9.88	mg/kg	12.17.19 17.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 10.20	Basis:	Wet Weight
Seq Number:	3110839				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**215**	50.1	mg/kg	12.17.19 15.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Total GRO-DRO	PHC628	**215**	50.1	mg/kg	12.17.19 15.15		1
Total TPH	PHC635	**215**	50.1	mg/kg	12.17.19 15.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	12.17.19 15.15	
o-Terphenyl	84-15-1	98	%	70-135	12.17.19 15.15	

Certificate of Analytical Results 646590

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-002	Date Collected:	12.16.19 11.55	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.17.19 16.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.17.19 16.18	U	1
Ethylbenzene	100-41-4	**0.0158**	0.00199	mg/kg	12.17.19 16.18		1
m,p-Xylenes	179601-23-1	**0.0300**	0.00398	mg/kg	12.17.19 16.18		1
o-Xylene	95-47-6	**0.0186**	0.00199	mg/kg	12.17.19 16.18		1
Xylenes, Total	1330-20-7	**0.0486**	0.00199	mg/kg	12.17.19 16.18		1
Total BTEX		**0.0644**	0.00199	mg/kg	12.17.19 16.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.17.19 16.18	
1,4-Difluorobenzene	540-36-3	93	%	70-130	12.17.19 16.18	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-003	Date Collected:	12.16.19 11.57	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.6**	9.92	mg/kg	12.17.19 18.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 10.20	Basis:	Wet Weight
Seq Number:	3110839				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.17.19 15.15	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.17.19 15.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	12.17.19 15.15	
o-Terphenyl	84-15-1	86	%	70-135	12.17.19 15.15	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-003	Date Collected:	12.16.19 11.57	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.17.19 16.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.17.19 16.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	12.17.19 16.35	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.17.19 16.35	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-004	Date Collected:	12.16.19 11.50	Sample Depth:	0.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.6**	9.98	mg/kg	12.17.19 18.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 10.20	Basis:	Wet Weight
Seq Number:	3110839				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.17.19 15.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.17.19 15.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.17.19 15.36	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.17.19 15.36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.17.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	12.17.19 15.36	
o-Terphenyl	84-15-1	87	%	70-135	12.17.19 15.36	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-004	Date Collected:	12.16.19 11.50	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.17.19 16.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.17.19 16.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.17.19 16.53	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.17.19 16.53	

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RDU 11

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-005	Date Collected:	12.16.19 12.00	Sample Depth:	0.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.3**	9.92	mg/kg	12.17.19 18.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 15.00	Basis:	Wet Weight
Seq Number:	3110877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1270**	50.2	mg/kg	12.17.19 16.54		1
Diesel Range Organics (DRO)	C10C28DRO	**4620**	50.2	mg/kg	12.17.19 16.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**466**	50.2	mg/kg	12.17.19 16.54		1
Total GRO-DRO	PHC628	**5890**	50.2	mg/kg	12.17.19 16.54		1
Total TPH	PHC635	**6360**	50.2	mg/kg	12.17.19 16.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	12.17.19 16.54	
o-Terphenyl	84-15-1	98	%	70-135	12.17.19 16.54	

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RDU 11

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-005	Date Collected:	12.16.19 12.00	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.146**	0.0992	mg/kg	12.17.19 17.28		50
Toluene	108-88-3	**4.95**	0.0992	mg/kg	12.17.19 17.28		50
Ethylbenzene	100-41-4	**8.82**	0.0992	mg/kg	12.17.19 17.28		50
m,p-Xylenes	179601-23-1	**17.9**	0.198	mg/kg	12.17.19 17.28		50
o-Xylene	95-47-6	**10.3**	0.0992	mg/kg	12.17.19 17.28		50
Xylenes, Total	1330-20-7	**28.2**	0.0992	mg/kg	12.17.19 17.28		50
Total BTEX		**42.1**	0.0992	mg/kg	12.17.19 17.28		50

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	12.17.19 17.28	
4-Bromofluorobenzene	460-00-4	121	%	70-130	12.17.19 17.28	

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RDU 11

Sample Id: **SW03** Matrix: Soil Date Received:12.17.19 10.45
Lab Sample Id: 646590-006 Date Collected: 12.16.19 12.02 Sample Depth: 0.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 12.17.19 15.29 Basis: Wet Weight
Seq Number: 3110874

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**607**	9.88	mg/kg	12.17.19 18.32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 12.17.19 15.00 Basis: Wet Weight
Seq Number: 3110877

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.17.19 16.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.17.19 16.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.17.19 16.15	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.17.19 16.15	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.17.19 16.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	12.17.19 16.15	
o-Terphenyl	84-15-1	127	%	70-135	12.17.19 16.15	

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RDU 11

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-006	Date Collected:	12.16.19 12.02	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.17.19 17.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.17.19 17.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.17.19 17.10	
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.17.19 17.10	

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RDU 11

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-007	Date Collected:	12.16.19 12.05	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.3**	9.90	mg/kg	12.17.19 18.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 15.00	Basis:	Wet Weight
Seq Number:	3110877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3960**	251	mg/kg	12.17.19 16.54		5
Diesel Range Organics (DRO)	C10C28DRO	**20500**	251	mg/kg	12.17.19 16.54		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1860**	251	mg/kg	12.17.19 16.54		5
Total GRO-DRO	PHC628	**24500**	251	mg/kg	12.17.19 16.54		5
Total TPH	PHC635	**26300**	251	mg/kg	12.17.19 16.54		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	12.17.19 16.54	
o-Terphenyl	84-15-1	90	%	70-135	12.17.19 16.54	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-007	Date Collected:	12.16.19 12.05	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.121**	0.100	mg/kg	12.17.19 17.45		100
Toluene	108-88-3	**5.92**	0.200	mg/kg	12.17.19 17.45		100
Ethylbenzene	100-41-4	**11.3**	0.200	mg/kg	12.17.19 17.45		100
m,p-Xylenes	179601-23-1	**21.4**	0.401	mg/kg	12.17.19 17.45		100
o-Xylene	95-47-6	**14.5**	0.200	mg/kg	12.17.19 17.45		100
Xylenes, Total	1330-20-7	**35.9**	0.200	mg/kg	12.17.19 17.45		100
Total BTEX		**53.2**	0.100	mg/kg	12.17.19 17.45		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	12.17.19 17.45	
1,4-Difluorobenzene	540-36-3	92	%	70-130	12.17.19 17.45	

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RDU 11

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-008	Date Collected:	12.16.19 12.07	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	12.17.19 18.44	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 15.00	Basis:	Wet Weight
Seq Number:	3110877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**3100**	251	mg/kg	12.17.19 17.34		5
Diesel Range Organics (DRO)	C10C28DRO	**18700**	251	mg/kg	12.17.19 17.34		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1600**	251	mg/kg	12.17.19 17.34		5
Total GRO-DRO	PHC628	**21800**	251	mg/kg	12.17.19 17.34		5
Total TPH	PHC635	**23400**	251	mg/kg	12.17.19 17.34		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.17.19 17.34	
o-Terphenyl	84-15-1	134	%	70-135	12.17.19 17.34	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-008	Date Collected:	12.16.19 12.07	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.111**	0.100	mg/kg	12.17.19 18.02		100
Toluene	108-88-3	**5.52**	0.201	mg/kg	12.17.19 18.02		100
Ethylbenzene	100-41-4	**9.49**	0.201	mg/kg	12.17.19 18.02		100
m,p-Xylenes	179601-23-1	**20.4**	0.402	mg/kg	12.17.19 18.02		100
o-Xylene	95-47-6	**11.1**	0.201	mg/kg	12.17.19 18.02		100
Xylenes, Total	1330-20-7	**31.5**	0.201	mg/kg	12.17.19 18.02		100
Total BTEX		**46.6**	0.100	mg/kg	12.17.19 18.02		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	12.17.19 18.02	
1,4-Difluorobenzene	540-36-3	91	%	70-130	12.17.19 18.02	

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RDU 11

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-009	Date Collected:	12.16.19 12.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 15.29	Basis:	Wet Weight
Seq Number:	3110874				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**77.6**	9.92	mg/kg	12.17.19 18.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.17.19 15.00	Basis:	Wet Weight
Seq Number:	3110877				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**5480**	502	mg/kg	12.18.19 08.59		10
Diesel Range Organics (DRO)	C10C28DRO	**38000**	502	mg/kg	12.18.19 08.59		10
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**3970**	502	mg/kg	12.18.19 08.59		10
Total GRO-DRO	PHC628	**43500**	502	mg/kg	12.18.19 08.59		10
Total TPH	PHC635	**47500**	502	mg/kg	12.18.19 08.59		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.18.19 08.59	
o-Terphenyl	84-15-1	125	%	70-135	12.18.19 08.59	

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RDU 11

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	12.17.19 10.45
Lab Sample Id:	646590-009	Date Collected:	12.16.19 12.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.17.19 14.55	Basis:	Wet Weight
Seq Number:	3110867				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.631**	0.200	mg/kg	12.17.19 18.20		100
Toluene	108-88-3	**17.6**	0.200	mg/kg	12.17.19 18.20		100
Ethylbenzene	100-41-4	**18.6**	0.200	mg/kg	12.17.19 18.20		100
m,p-Xylenes	179601-23-1	**47.6**	0.401	mg/kg	12.17.19 18.20		100
o-Xylene	95-47-6	**28.0**	0.200	mg/kg	12.17.19 18.20		100
Xylenes, Total	1330-20-7	**75.6**	0.200	mg/kg	12.17.19 18.20		100
Total BTEX		**112**	0.200	mg/kg	12.17.19 18.20		100

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	131	%	70-130	12.17.19 18.20	**
1,4-Difluorobenzene	540-36-3	90	%	70-130	12.17.19 18.20	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 646590

LT Environmental, Inc.

RDU 11

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110874 Matrix: Solid Date Prep: 12.17.19
MB Sample Id: 7692648-1-BLK LCS Sample Id: 7692648-1-BKS LCSD Sample Id: 7692648-1-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	262	105	263	105	90-110	0	20	mg/kg	12.17.19 17:28	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110874 Matrix: Soil Date Prep: 12.17.19
Parent Sample Id: 646590-001 MS Sample Id: 646590-001 S MSD Sample Id: 646590-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	64.4	200	281	108	279	108	90-110	1	20	mg/kg	12.17.19 17:46	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110874 Matrix: Soil Date Prep: 12.17.19
Parent Sample Id: 646622-002 MS Sample Id: 646622-002 S MSD Sample Id: 646622-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	57.2	199	276	110	276	109	90-110	0	20	mg/kg	12.17.19 19:23	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3110839 Matrix: Solid Date Prep: 12.17.19
MB Sample Id: 7692637-1-BLK LCS Sample Id: 7692637-1-BKS LCSD Sample Id: 7692637-1-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	967	97	964	96	70-135	0	35	mg/kg	12.17.19 11:16	
Diesel Range Organics (DRO)	<50.0	1000	830	83	874	87	70-135	5	35	mg/kg	12.17.19 11:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		96		100		70-135	%	12.17.19 11:16
o-Terphenyl	95		94		99		70-135	%	12.17.19 11:16

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

QC Summary 646590

LT Environmental, Inc.

RDU 11

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110877 — Matrix: Solid — Date Prep: 12.17.19
MB Sample Id: 7692669-1-BLK — LCS Sample Id: 7692669-1-BKS — LCSD Sample Id: 7692669-1-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	1110	111	1130	113	70-135	2	35	mg/kg	12.17.19 15:55	
Diesel Range Organics (DRO)	<50.0	1000	1210	121	1190	119	70-135	2	35	mg/kg	12.17.19 15:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		129		129		70-135	%	12.17.19 15:55
o-Terphenyl	130		130		132		70-135	%	12.17.19 15:55

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110839 — Matrix: Solid — Date Prep: 12.17.19
MB Sample Id: 7692637-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.17.19 10:56	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110877 — Matrix: Solid — Date Prep: 12.17.19
MB Sample Id: 7692669-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.17.19 15:55	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110839 — Matrix: Soil — Date Prep: 12.17.19
Parent Sample Id: 646531-018 — MS Sample Id: 646531-018 S — MSD Sample Id: 646531-018 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)	<49.8	995	856	86	902	90	70-135	5	35	mg/kg	12.17.19 11:58	
Diesel Range Organics (DRO)	<49.8	995	767	77	780	78	70-135	2	35	mg/kg	12.17.19 11:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		96		70-135	%	12.17.19 11:58
o-Terphenyl	98		96		70-135	%	12.17.19 11:58

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

QC Summary 646590

LT Environmental, Inc.

RDU 11

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3110877 Matrix: Soil Date Prep: 12.17.19
Parent Sample Id: 646590-006 MS Sample Id: 646590-006 S MSD Sample Id: 646590-006 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	1030	103	858	86	70-135	18	35	mg/kg	12.17.19 16:35	
Diesel Range Organics (DRO)	<50.1	1000	890	89	759	76	70-135	16	35	mg/kg	12.17.19 16:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		100		70-135	%	12.17.19 16:35
o-Terphenyl	109		97		70-135	%	12.17.19 16:35

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3110867 Matrix: Solid Date Prep: 12.17.19
MB Sample Id: 7692636-1-BLK LCS Sample Id: 7692636-1-BKS LCSD Sample Id: 7692636-1-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	0.0932	93	0.0913	91	70-130	2	35	mg/kg	12.17.19 14:08	
Toluene	<0.00200	0.100	0.0929	93	0.0913	91	70-130	2	35	mg/kg	12.17.19 14:08	
Ethylbenzene	<0.00200	0.100	0.0911	91	0.0898	90	71-129	1	35	mg/kg	12.17.19 14:08	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.186	93	70-135	2	35	mg/kg	12.17.19 14:08	
o-Xylene	<0.00200	0.100	0.0919	92	0.0910	91	71-133	1	35	mg/kg	12.17.19 14:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		99		70-130	%	12.17.19 14:08
4-Bromofluorobenzene	100		100		96		70-130	%	12.17.19 14:08

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3110867 Matrix: Soil Date Prep: 12.17.19
Parent Sample Id: 646590-001 MS Sample Id: 646590-001 S MSD Sample Id: 646590-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0792	79	0.0818	82	70-130	3	35	mg/kg	12.17.19 14:42	
Toluene	<0.00200	0.100	0.0773	77	0.0808	81	70-130	4	35	mg/kg	12.17.19 14:42	
Ethylbenzene	<0.00200	0.100	0.0699	70	0.0756	76	71-129	8	35	mg/kg	12.17.19 14:42	X
m,p-Xylenes	<0.000755	0.200	0.145	73	0.157	79	70-135	8	35	mg/kg	12.17.19 14:42	
o-Xylene	<0.00200	0.100	0.0721	72	0.0777	78	71-133	7	35	mg/kg	12.17.19 14:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	12.17.19 14:42
4-Bromofluorobenzene	101		100		70-130	%	12.17.19 14:42

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

XC 12/17/19

Chain of Custody

Work Order No: ~~64656~~ 64659

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) 689-6701
www.xenco.com

Project Manager:	Chris McKissen	Bill to: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckissen@ltenv.com dabyers@ltenv.com

Work Order Comments

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

Project Name:	RDU 11	Turn Around	
Project Number:	03481907 1	Routine ☐	
Project Location	Rural Eddy County	Rush: 3 DAY	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-5698	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.6	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	9

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Cl-Ionides (EPA 300.0)	Sample Comments
	FS01	S	12/16/19	1145	2-4'	1				
	FS02			1155	4'	1				
	FS03			1157	4'	1				
	SW01			1150	0.5-4'	1				
	SW02			1200	0.5-4'	1				
	SW03			1202	0.5-4'	1				
	SW04			1205	1'	1				discrete
	SW05			1207	0.5'	1				discrete
	SW06			1210	1'	1				discrete

ANALYSIS REQUEST

Preservative Codes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		12/17/19 10:45 ~~11:45~~ AM			12/17/19 11:00
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/17/2019 10:45:00 AM

Work Order #: 646590

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)?	.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6*Custody Seals Signed and dated?	**No**
#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)?	**Yes**
#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: Martha Castro Date: 12/17/2019

Checklist reviewed by: Jessica Kramer Date: 12/17/2019

Analytical Report 647461

for

LT Environmental, Inc.

Project Manager: Dan Moir

RDU II (2RP-5698)

034819071

30-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

30-DEC-19

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

Reference: XENCO Report No(s): **647461**
RDU II (2RP-5698)
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 647461. 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. 647461 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 647461

LT Environmental, Inc., Arvada, CO

RDU II (2RP-5698)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04	S	12-24-19 10:00	1.5 - 4 ft	647461-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDU II (2RP-5698)

Project ID: *034819071*
Work Order Number(s): *647461*

Report Date: *30-DEC-19*
Date Received: *12/24/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3111623 BTEX by EPA 8021B

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

Certificate of Analysis Summary 647461

LT Environmental, Inc., Arvada, CO

Project Name: RDU II (2RP-5698)

Project Id: 034819071
Contact: Dan Moir
Project Location:

Date Received in Lab: Tue Dec-24-19 12:30 pm
Report Date: 30-DEC-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	647461-001					
	Field Id:	FS04					
	Depth:	1.5-4 ft					
	Matrix:	SOIL					
	Sampled:	Dec-24-19 10:00					
BTEX by EPA 8021B	***Extracted:***	Dec-24-19 14:00					
	Analyzed:	Dec-24-19 16:43					
	Units/RL:	mg/kg	RL				
Benzene		<0.0217	0.0217				
Toluene		<0.0217	0.0217				
Ethylbenzene		<0.0217	0.0217				
m,p-Xylenes		<0.0435	0.0435				
o-Xylene		<0.0217	0.0217				
Xylenes, Total		<0.0217	0.0217				
Total BTEX		<0.0217	0.0217				
Chloride by EPA 300	***Extracted:***	Dec-27-19 07:30					
	Analyzed:	Dec-27-19 09:34					
	Units/RL:	mg/kg	RL				
Chloride		17.9	9.98				
TPH by SW8015 Mod	***Extracted:***	Dec-24-19 13:00					
	Analyzed:	Dec-24-19 13:16					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9				
Diesel Range Organics (DRO)		164	49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9				
Total GRO-DRO		164	49.9				
Total TPH		164	49.9				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 647461

LT Environmental, Inc., Arvada, CO

RDU II (2RP-5698)

Sample Id: **FS04** Matrix: Soil Date Received:12.24.19 12.30
Lab Sample Id: 647461-001 Date Collected: 12.24.19 10.00 Sample Depth: 1.5 - 4 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 12.27.19 07.30 Basis: Wet Weight
Seq Number: 3111866

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.9**	9.98	mg/kg	12.27.19 09.34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: DTH % Moisture:
Analyst: DTH Date Prep: 12.24.19 13.00 Basis: Wet Weight
Seq Number: 3111671

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.24.19 13.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**164**	49.9	mg/kg	12.24.19 13.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.24.19 13.16	U	1
Total GRO-DRO	PHC628	**164**	49.9	mg/kg	12.24.19 13.16		1
Total TPH	PHC635	**164**	49.9	mg/kg	12.24.19 13.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	12.24.19 13.16	
o-Terphenyl	84-15-1	111	%	70-135	12.24.19 13.16	

Certificate of Analytical Results 647461

LT Environmental, Inc., Arvada, CO

RDU II (2RP-5698)

Sample Id: **FS04** Matrix: Soil Date Received:12.24.19 12.30

Lab Sample Id: 647461-001 Date Collected: 12.24.19 10.00 Sample Depth: 1.5 - 4 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 12.24.19 14.00 Basis: Wet Weight

Seq Number: 3111623

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1
Toluene	108-88-3	<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1
Ethylbenzene	100-41-4	<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1
m,p-Xylenes	179601-23-1	<0.0435	0.0435	mg/kg	12.24.19 16.43	U	1
o-Xylene	95-47-6	<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1
Xylenes, Total	1330-20-7	<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1
Total BTEX		<0.0217	0.0217	mg/kg	12.24.19 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	12.24.19 16.43	
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.24.19 16.43	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 647461

LT Environmental, Inc.

RDU II (2RP-5698)

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111866 Matrix: Solid Date Prep: 12.27.19
MB Sample Id: 7693247-1-BLK LCS Sample Id: 7693247-1-BKS LCSD Sample Id: 7693247-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	257	103	256	102	90-110	0	20	mg/kg	12.27.19 09:23	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3111866 Matrix: Soil Date Prep: 12.27.19
Parent Sample Id: 647461-001 MS Sample Id: 647461-001 S MSD Sample Id: 647461-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.9	199	223	103	224	103	90-110	0	20	mg/kg	12.27.19 09:40	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3111671 Matrix: Solid Date Prep: 12.24.19
MB Sample Id: 7693227-1-BLK LCS Sample Id: 7693227-1-BKS LCSD Sample Id: 7693227-1-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)	<13.9	1000	1220	122	1230	123	70-135	1	35	mg/kg	12.24.19 12:16	
Diesel Range Organics (DRO)	<11.5	1000	1240	124	1260	126	70-135	2	35	mg/kg	12.24.19 12:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		128		111		70-135	%	12.24.19 12:16
o-Terphenyl	98		120		111		70-135	%	12.24.19 12:16

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3111671 Matrix: Solid Date Prep: 12.24.19
MB Sample Id: 7693227-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.24.19 11:57	

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

QC Summary 647461

LT Environmental, Inc.

RDU II (2RP-5698)

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3111671 | Matrix: Soil | Date Prep: 12.24.19
Parent Sample Id: 647387-035 | MS Sample Id: 647387-035 S | MSD Sample Id: 647387-035 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)	<13.8	996	898	90	1010	101	70-135	12	35	mg/kg	12.24.19 12:36	
Diesel Range Organics (DRO)	28.6	996	973	95	1070	104	70-135	9	35	mg/kg	12.24.19 12:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		122		70-135	%	12.24.19 12:36
o-Terphenyl	110		119		70-135	%	12.24.19 12:36

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3111623 | Matrix: Solid | Date Prep: 12.24.19
MB Sample Id: 7693185-1-BLK | LCS Sample Id: 7693185-1-BKS | LCSD Sample Id: 7693185-1-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	0.100	100	0.0973	97	70-130	3	35	mg/kg	12.24.19 09:12	
Toluene	<0.00200	0.100	0.100	100	0.0967	97	70-130	3	35	mg/kg	12.24.19 09:12	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0937	94	71-129	4	35	mg/kg	12.24.19 09:12	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.193	97	70-135	5	35	mg/kg	12.24.19 09:12	
o-Xylene	<0.00200	0.100	0.0998	100	0.0962	96	71-133	4	35	mg/kg	12.24.19 09:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		101		70-130	%	12.24.19 09:12
4-Bromofluorobenzene	99		101		104		70-130	%	12.24.19 09:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3111623 | Matrix: Soil | Date Prep: 12.24.19
Parent Sample Id: 647387-036 | MS Sample Id: 647387-036 S | MSD Sample Id: 647387-036 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	0.0891	88	0.102	102	70-130	14	35	mg/kg	12.24.19 09:47	
Toluene	<0.00201	0.101	0.0828	82	0.0975	98	70-130	16	35	mg/kg	12.24.19 09:47	
Ethylbenzene	<0.00201	0.101	0.0732	72	0.0894	89	71-129	20	35	mg/kg	12.24.19 09:47	
m,p-Xylenes	<0.00402	0.201	0.147	73	0.182	91	70-135	21	35	mg/kg	12.24.19 09:47	
o-Xylene	<0.00201	0.101	0.0746	74	0.0907	91	71-133	19	35	mg/kg	12.24.19 09:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		103		70-130	%	12.24.19 09:47
4-Bromofluorobenzene	103		108		70-130	%	12.24.19 09:47

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

Final 1.000

Chain of Custody

Work Order No: 647461

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

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

Work Order Comments

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

Project Name:	RDU 11 (ZRP-5698)	Turn Around	
Project Number:	034819071	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belill	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	4.7	Thermometer ID		
Received Intact:	Yes No	TNM007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	1	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS04	S	12/24/19	1000	1.5-4'	1	x	x	x

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

Composite

FS08 12/24/19

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/24/19 1230	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/24/2019 12:30:00 PM

Work Order #: 647461

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)?	4.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**No**
#6*Custody Seals Signed and dated?	**No**
#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)?	**Yes**
#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: Martha Castro Date: 12/24/2019

Checklist reviewed by: Jessica Kramer Date: 12/27/2019

Analytical Report 648485

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 11

034819071

10-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

10-JAN-20

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

Reference: XENCO Report No(s): **648485**
RDU 11
Project Address: Eddy County

Chris McKisson:

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) 648485. 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. 648485 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 648485

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS04 A	S	01-08-20 09:25	4 ft	648485-001
FS05	S	01-08-20 09:30	4 ft	648485-002
FS06	S	01-08-20 09:35	4 ft	648485-003
FS07	S	01-08-20 15:35	4 - 5 ft	648485-004
FS08	S	01-08-20 10:15	4.5 ft	648485-005
SW07	S	01-08-20 15:45	0.5 - 5 ft	648485-006
SW08	S	01-08-20 11:30	0.5 - 4.5 ft	648485-007
SW09	S	01-08-20 11:40	0.5 - 4 ft	648485-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDU 11

Project ID: *034819071*
Work Order Number(s): *648485*

Report Date: *10-JAN-20*
Date Received: *01/09/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3112829 BTEX by EPA 8021B

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

Certificate of Analysis Summary 648485

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Thu Jan-09-20 11:07 am
Report Date: 10-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	648485-001		648485-002		648485-003		648485-004		648485-005		648485-006	
	Field Id:	FS04 A		FS05		FS06		FS07		FS08		SW07	
	Depth:	4- ft		4- ft		4- ft		4-5 ft		4.5- ft		0.5-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-08-20 09:25		Jan-08-20 09:30		Jan-08-20 09:35		Jan-08-20 15:35		Jan-08-20 10:15		Jan-08-20 15:45	
BTEX by EPA 8021B	***Extracted:***	Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28		Jan-09-20 13:28	
	Analyzed:	Jan-09-20 23:58		Jan-10-20 00:17		Jan-10-20 00:36		Jan-10-20 00:55		Jan-10-20 01:15		Jan-10-20 01:34	
	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	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00402	0.00402	<0.00403	0.00403	<0.00403	0.00403	<0.00403	0.00403	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Xylenes, Total		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00202	0.00202	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32		Jan-09-20 12:32	
	Analyzed:	Jan-09-20 14:37		Jan-09-20 14:53		Jan-09-20 14:58		Jan-09-20 15:04		Jan-09-20 15:09		Jan-09-20 15:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16.5	10.1	39.6	10.0	782	50.2	256	10.1	660	50.1	151	9.98
TPH by SW8015 Mod	***Extracted:***	Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30		Jan-09-20 15:30	
	Analyzed:	Jan-09-20 23:54		Jan-10-20 10:25		Jan-10-20 00:14		Jan-10-20 10:45		Jan-10-20 00:34		Jan-10-20 11:05	
	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	<50.2	50.2	<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1
Diesel Range Organics (DRO)		<50.0	50.0	<50.2	50.2	87.1	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.2	50.2	<49.9	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1
Total GRO-DRO		<50.0	50.0	<50.2	50.2	87.1	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1
Total TPH		<50.0	50.0	<50.2	50.2	87.1	49.9	<50.2	50.2	<49.9	49.9	<50.1	50.1

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 648485

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Thu Jan-09-20 11:07 am
Report Date: 10-JAN-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	648485-007		648485-008					
	Field Id:	SW08		SW09					
	Depth:	0.5-4.5 ft		0.5-4 ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Jan-08-20 11:30		Jan-08-20 11:40					
BTEX by EPA 8021B	***Extracted:***	Jan-09-20 13:28		Jan-09-20 13:28					
	Analyzed:	Jan-10-20 01:53		Jan-10-20 02:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00202	0.00202				
Toluene		<0.00202	0.00202	<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202				
m,p-Xylenes		<0.00404	0.00404	<0.00403	0.00403				
o-Xylene		<0.00202	0.00202	<0.00202	0.00202				
Xylenes, Total		<0.00202	0.00202	<0.00202	0.00202				
Total BTEX		<0.00202	0.00202	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Jan-09-20 12:32		Jan-09-20 12:32					
	Analyzed:	Jan-09-20 15:31		Jan-09-20 15:36					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		866	49.7	19.4	9.98				
TPH by SW8015 Mod	***Extracted:***	Jan-09-20 15:30		Jan-09-20 15:30					
	Analyzed:	Jan-10-20 00:54		Jan-10-20 11:25					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.0	50.0				
Diesel Range Organics (DRO)		<50.2	50.2	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.0	50.0				
Total GRO-DRO		<50.2	50.2	<50.0	50.0				
Total TPH		<50.2	50.2	<50.0	50.0				

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 648485

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS04 A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-001	Date Collected:	01.08.20 09.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.5**	10.1	mg/kg	01.09.20 14.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.09.20 23.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.09.20 23.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.09.20 23.54	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.09.20 23.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.09.20 23.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	01.09.20 23.54	
o-Terphenyl	84-15-1	114	%	70-135	01.09.20 23.54	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS04 A**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-001	Date Collected:	01.08.20 09.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.09.20 23.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.09.20 23.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.09.20 23.58	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.09.20 23.58	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-002	Date Collected:	01.08.20 09.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**39.6**	10.0	mg/kg	01.09.20 14.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 10.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.10.20 10.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 10.25	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.10.20 10.25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.10.20 10.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.10.20 10.25	
o-Terphenyl	84-15-1	103	%	70-135	01.10.20 10.25	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-002	Date Collected:	01.08.20 09.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 00.17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 00.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.10.20 00.17	
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.10.20 00.17	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-003	Date Collected:	01.08.20 09.35	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**782**	50.2	mg/kg	01.09.20 14.58		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.20 00.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	**87.1**	49.9	mg/kg	01.10.20 00.14		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.20 00.14	U	1
Total GRO-DRO	PHC628	**87.1**	49.9	mg/kg	01.10.20 00.14		1
Total TPH	PHC635	**87.1**	49.9	mg/kg	01.10.20 00.14		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	01.10.20 00.14	
o-Terphenyl	84-15-1	104	%	70-135	01.10.20 00.14	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-003	Date Collected:	01.08.20 09.35	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 00.36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 00.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.10.20 00.36	
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.10.20 00.36	

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RDU 11

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-004	Date Collected:	01.08.20 15.35	Sample Depth:	4 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**256**	10.1	mg/kg	01.09.20 15.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 10.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.10.20 10.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 10.45	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.10.20 10.45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.10.20 10.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	01.10.20 10.45	
o-Terphenyl	84-15-1	107	%	70-135	01.10.20 10.45	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-004	Date Collected:	01.08.20 15.35	Sample Depth:	4 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 00.55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 00.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.10.20 00.55	
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.10.20 00.55	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-005	Date Collected:	01.08.20 10.15	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**660**	50.1	mg/kg	01.09.20 15.09		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	01.10.20 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	01.10.20 00.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.10.20 00.34	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	01.10.20 00.34	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.10.20 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.10.20 00.34	
o-Terphenyl	84-15-1	101	%	70-135	01.10.20 00.34	

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LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-005	Date Collected:	01.08.20 10.15	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 01.15	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 01.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.10.20 01.15	
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.10.20 01.15	

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RDU 11

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-006	Date Collected:	01.08.20 15.45	Sample Depth:	0.5 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**151**	9.98	mg/kg	01.09.20 15.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.10.20 11.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.10.20 11.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.10.20 11.05	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.10.20 11.05	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.10.20 11.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	01.10.20 11.05	
o-Terphenyl	84-15-1	103	%	70-135	01.10.20 11.05	

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RDU 11

Sample Id:	**SW07**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-006	Date Collected:	01.08.20 15.45	Sample Depth:	0.5 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.10.20 01.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.10.20 01.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	01.10.20 01.34	
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.10.20 01.34	

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RDU 11

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-007	Date Collected:	01.08.20 11.30	Sample Depth:	0.5 - 4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**866**	49.7	mg/kg	01.09.20 15.31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.10.20 00.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.10.20 00.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.10.20 00.54	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.10.20 00.54	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.10.20 00.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	01.10.20 00.54	
o-Terphenyl	84-15-1	103	%	70-135	01.10.20 00.54	

Certificate of Analytical Results 648485

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW08**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-007	Date Collected:	01.08.20 11.30	Sample Depth:	0.5 - 4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.10.20 01.53	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 01.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	01.10.20 01.53	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.10.20 01.53	

Certificate of Analytical Results 648485

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-008	Date Collected:	01.08.20 11.40	Sample Depth:	0.5 - 4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 12.32	Basis:	Wet Weight
Seq Number:	3112840				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.4**	9.98	mg/kg	01.09.20 15.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.09.20 15.30	Basis:	Wet Weight
Seq Number:	3112853				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	01.10.20 11.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	01.10.20 11.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.10.20 11.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	01.10.20 11.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.10.20 11.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	01.10.20 11.25	
o-Terphenyl	84-15-1	102	%	70-135	01.10.20 11.25	

Certificate of Analytical Results 648485

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW09**	Matrix:	Soil	Date Received:	01.09.20 11.07
Lab Sample Id:	648485-008	Date Collected:	01.08.20 11.40	Sample Depth:	0.5 - 4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.09.20 13.28	Basis:	Wet Weight
Seq Number:	3112829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.10.20 02.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.10.20 02.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.10.20 02.12	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.10.20 02.12	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 648485

LT Environmental, Inc.

RDU 11

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694036-1-BLK — LCS Sample Id: 7694036-1-BKS — LCSD Sample Id: 7694036-1-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	265	106	260	104	90-110	2	20	mg/kg	01.09.20 14:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Soil — Date Prep: 01.09.20
Parent Sample Id: 648485-001 — MS Sample Id: 648485-001 S — MSD Sample Id: 648485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.5	201	226	104	224	103	90-110	1	20	mg/kg	01.09.20 14:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3112840 — Matrix: Soil — Date Prep: 01.09.20
Parent Sample Id: 648492-003 — MS Sample Id: 648492-003 S — MSD Sample Id: 648492-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.0	202	195	87	192	87	90-110	2	20	mg/kg	01.09.20 15:58	X

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112853 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694039-1-BLK — LCS Sample Id: 7694039-1-BKS — LCSD Sample Id: 7694039-1-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	1300	130	1180	118	70-135	10	35	mg/kg	01.10.20 09:25	
Diesel Range Organics (DRO)	<50.0	1000	1240	124	1080	108	70-135	14	35	mg/kg	01.10.20 09:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		121		127		70-135	%	01.10.20 09:25
o-Terphenyl	91		108		100		70-135	%	01.10.20 09:25

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3112853 — Matrix: Solid — Date Prep: 01.09.20
MB Sample Id: 7694039-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.09.20 22:54	

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

QC Summary 648485

LT Environmental, Inc.

RDU 11

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3112853 | Matrix: Soil | Date Prep: 01.09.20
Parent Sample Id: 648406-011 | MS Sample Id: 648406-011 S | MSD Sample Id: 648406-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1370	137	1300	129	70-135	5	35	mg/kg	01.09.20 23:35	X
Diesel Range Organics (DRO)	<50.2	1000	1130	113	1240	123	70-135	9	35	mg/kg	01.09.20 23:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		134		70-135	%	01.09.20 23:35
o-Terphenyl	128		135		70-135	%	01.09.20 23:35

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112829 | Matrix: Solid | Date Prep: 01.09.20
MB Sample Id: 7694035-1-BLK | LCS Sample Id: 7694035-1-BKS | LCSD Sample Id: 7694035-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.129	129	70-130	20	35	mg/kg	01.09.20 22:22	
Toluene	<0.00200	0.100	0.105	105	0.130	130	70-130	21	35	mg/kg	01.09.20 22:22	
Ethylbenzene	<0.00200	0.100	0.107	107	0.128	128	71-129	18	35	mg/kg	01.09.20 22:22	
m,p-Xylenes	<0.00400	0.200	0.216	108	0.257	129	70-135	17	35	mg/kg	01.09.20 22:22	
o-Xylene	<0.00200	0.100	0.108	108	0.131	131	71-133	19	35	mg/kg	01.09.20 22:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		103		70-130	%	01.09.20 22:22
4-Bromofluorobenzene	102		105		112		70-130	%	01.09.20 22:22

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3112829 | Matrix: Soil | Date Prep: 01.09.20
Parent Sample Id: 648485-001 | MS Sample Id: 648485-001 S | MSD Sample Id: 648485-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.0964	96	70-130	15	35	mg/kg	01.09.20 23:01	
Toluene	<0.00200	0.100	0.109	109	0.0905	91	70-130	19	35	mg/kg	01.09.20 23:01	
Ethylbenzene	<0.00200	0.100	0.107	107	0.0854	85	71-129	22	35	mg/kg	01.09.20 23:01	
m,p-Xylenes	<0.00401	0.200	0.215	108	0.169	85	70-135	24	35	mg/kg	01.09.20 23:01	
o-Xylene	<0.00200	0.100	0.109	109	0.0871	87	71-133	22	35	mg/kg	01.09.20 23:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		105		70-130	%	01.09.20 23:01
4-Bromofluorobenzene	114		114		70-130	%	01.09.20 23:01

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

Chain of Custody

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

Work Order No: 648485

Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com + abyers@ltenv.com

Work Order Comments

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

Project Name:	RDU 11	Turn Around	
Project Number:	03481907 1	Routine ☐	
Project Location	Eddy County	Rush: 3 DAY	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	10.10.2019	Quote #:	

SAMPLE RECEIPT

Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	3.6	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	8

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	~~FS02A~~ FS04A	S	1/8/20	0925	4'	1			
	FS05			0930	4'	1			
	FS06			0935	4'	1			
	FS07			1535	4-5'	1			
	FS08			1015	4.5'	1			
	SW07			1545	0.5-5'	1			
	SW08			1130	0.5-4.5'	1			
	SW09	↓	↓	1140	0.5-4'	1			

ANALYSIS REQUEST

Preservative Codes

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

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

Sample Comments

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

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

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

1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		1/9/20 10:00 am			
2						
3						
4						
5						
6						

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.09.2020 11.07.00 AM

Work Order #: 648485

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.09.2020

Checklist reviewed by: Jessica Kramer Date: 01.10.2020

Jessica Kramer

Analytical Report 649014

for

LT Environmental, Inc.

Project Manager: Chris McKisson

RDU 11

034819071

16-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

16-JAN-20

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

Reference: XENCO Report No(s): **649014**
RDU 11
Project Address: Rural Eddy County

Chris McKisson:

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) 649014. 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. 649014 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS06A	S	01-14-20 13:45	4.5 ft	649014-001
FS08A	S	01-14-20 13:50	5 ft	649014-002
SW10	S	01-14-20 13:55	0 - 5 ft	649014-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: RDU 11

Project ID: *034819071*
Work Order Number(s): *649014*

Report Date: *16-JAN-20*
Date Received: *01/14/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3113259 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3113342 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 649014-002.

Certificate of Analysis Summary 649014

LT Environmental, Inc., Arvada, CO

Project Name: RDU 11

Project Id: 034819071
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Tue Jan-14-20 03:30 pm
Report Date: 16-JAN-20
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	649014-001		649014-002		649014-003					
	Field Id:	FS06A		FS08A		SW10					
	Depth:	4.5- ft		5- ft		0-5 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jan-14-20 13:45		Jan-14-20 13:50		Jan-14-20 13:55					
BTEX by EPA 8021B	*Extracted:*	Jan-14-20 17:35		Jan-14-20 17:35		Jan-14-20 17:35					
	Analyzed:	Jan-15-20 02:57		Jan-15-20 03:16		Jan-15-20 03:35					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201				
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402				
o-Xylene		0.00240	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Xylenes, Total		0.00240	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Total BTEX		0.00240	0.00199	<0.00201	0.00201	<0.00201	0.00201				
Chloride by EPA 300	*Extracted:*	Jan-14-20 17:03		Jan-14-20 17:03		Jan-14-20 17:03					
	Analyzed:	Jan-14-20 22:27		Jan-14-20 22:32		Jan-14-20 22:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		122	9.96	193	9.94	228	9.94				
TPH by SW8015 Mod	*Extracted:*	Jan-15-20 18:00		Jan-15-20 18:00		Jan-15-20 18:00					
	Analyzed:	** ** ** **		** ** ** **		** ** ** **					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1				
Diesel Range Organics (DRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.1	50.1	<50.1	50.1				
Total GRO-DRO		<50.2	50.2	<50.1	50.1	<50.1	50.1				
Total TPH		<50.2	50.2	<50.1	50.1	<50.1	50.1				

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Jessica Kramer
Project Assistant

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-001	Date Collected:	01.14.20 13.45	Sample Depth:	4.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.03	Basis:	Wet Weight
Seq Number:	3113245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**122**	9.96	mg/kg	01.14.20 22.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.15.20 18.00	Basis:	Wet Weight
Seq Number:	3113342				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	01.15.20 01.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	01.15.20 01.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.15.20 01.16	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	01.15.20 01.16	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.15.20 01.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	01.15.20 01.16	
o-Terphenyl	84-15-1	126	%	70-135	01.15.20 01.16	

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS06A**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-001	Date Collected:	01.14.20 13.45	Sample Depth:	4.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.35	Basis:	Wet Weight
Seq Number:	3113259				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.15.20 02.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.15.20 02.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.15.20 02.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.15.20 02.57	U	1
o-Xylene	95-47-6	**0.00240**	0.00199	mg/kg	01.15.20 02.57		1
Xylenes, Total	1330-20-7	**0.00240**	0.00199	mg/kg	01.15.20 02.57		1
Total BTEX		**0.00240**	0.00199	mg/kg	01.15.20 02.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.15.20 02.57	
4-Bromofluorobenzene	460-00-4	107	%	70-130	01.15.20 02.57	

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS08A**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-002	Date Collected:	01.14.20 13.50	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.03	Basis:	Wet Weight
Seq Number:	3113245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**193**	9.94	mg/kg	01.14.20 22.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.15.20 18.00	Basis:	Wet Weight
Seq Number:	3113342				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.15.20 01.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	01.15.20 01.36	
o-Terphenyl	84-15-1	136	%	70-135	01.15.20 01.36	**

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**FS08A**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-002	Date Collected:	01.14.20 13.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.35	Basis:	Wet Weight
Seq Number:	3113259				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.15.20 03.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.15.20 03.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.15.20 03.16	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.15.20 03.16	

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-003	Date Collected:	01.14.20 13.55	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.03	Basis:	Wet Weight
Seq Number:	3113245				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**228**	9.94	mg/kg	01.14.20 22.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	01.15.20 18.00	Basis:	Wet Weight
Seq Number:	3113342				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	01.15.20 01.36	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.15.20 01.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	01.15.20 01.36	
o-Terphenyl	84-15-1	126	%	70-135	01.15.20 01.36	

Certificate of Analytical Results 649014

LT Environmental, Inc., Arvada, CO

RDU 11

Sample Id:	**SW10**	Matrix:	Soil	Date Received:	01.14.20 15.30
Lab Sample Id:	649014-003	Date Collected:	01.14.20 13.55	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	01.14.20 17.35	Basis:	Wet Weight
Seq Number:	3113259				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.15.20 03.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.15.20 03.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.15.20 03.35	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.15.20 03.35	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 649014

LT Environmental, Inc.

RDU 11

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113245 — Matrix: Solid — Date Prep: 01.14.20
MB Sample Id: 7694373-1-BLK — LCS Sample Id: 7694373-1-BKS — LCSD Sample Id: 7694373-1-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	252	101	251	100	90-110	0	20	mg/kg	01.14.20 21:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113245 — Matrix: Soil — Date Prep: 01.14.20
Parent Sample Id: 648981-033 — MS Sample Id: 648981-033 S — MSD Sample Id: 648981-033 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	70.6	201	276	102	279	104	90-110	1	20	mg/kg	01.14.20 21:38	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3113245 — Matrix: Soil — Date Prep: 01.14.20
Parent Sample Id: 649014-002 — MS Sample Id: 649014-002 S — MSD Sample Id: 649014-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	193	199	404	106	404	106	90-110	0	20	mg/kg	01.14.20 22:38	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113342 — Matrix: Solid — Date Prep: 01.15.20
MB Sample Id: 7694368-1-BLK — LCS Sample Id: 7694368-1-BKS — LCSD Sample Id: 7694368-1-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	852	85	947	95	70-135	11	35	mg/kg	01.15.20 00:16	
Diesel Range Organics (DRO)	<50.0	1000	738	74	816	82	70-135	10	35	mg/kg	01.15.20 00:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		90		104		70-135	%	01.15.20 00:16
o-Terphenyl	110		82		81		70-135	%	01.15.20 00:16

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3113342 — Matrix: Solid — Date Prep: 01.15.20
MB Sample Id: 7694368-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.14.20 23:55	

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

QC Summary 649014

LT Environmental, Inc.

RDU 11

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3113342 Matrix: Soil Date Prep: 01.15.20
Parent Sample Id: 648981-033 MS Sample Id: 648981-033 S MSD Sample Id: 648981-033 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	999	1160	116	985	98	70-135	16	35	mg/kg	01.15.20 18:48	
Diesel Range Organics (DRO)	84.7	999	1310	123	1170	107	70-135	11	35	mg/kg	01.15.20 18:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		116		70-135	%	01.15.20 18:48
o-Terphenyl	122		112		70-135	%	01.15.20 18:48

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113259 Matrix: Solid Date Prep: 01.14.20
MB Sample Id: 7694383-1-BLK LCS Sample Id: 7694383-1-BKS LCSD Sample Id: 7694383-1-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	0.0999	100	0.0997	100	70-130	0	35	mg/kg	01.15.20 00:43	
Toluene	<0.00200	0.100	0.0974	97	0.0963	96	70-130	1	35	mg/kg	01.15.20 00:43	
Ethylbenzene	<0.00200	0.100	0.0975	98	0.0954	95	71-129	2	35	mg/kg	01.15.20 00:43	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.190	95	70-135	2	35	mg/kg	01.15.20 00:43	
o-Xylene	<0.00200	0.100	0.0960	96	0.0963	96	71-133	0	35	mg/kg	01.15.20 00:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		103		70-130	%	01.15.20 00:43
4-Bromofluorobenzene	101		100		107		70-130	%	01.15.20 00:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3113259 Matrix: Soil Date Prep: 01.14.20
Parent Sample Id: 648981-035 MS Sample Id: 648981-035 S MSD Sample Id: 648981-035 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	0.0836	84	0.0996	100	70-130	17	35	mg/kg	01.15.20 01:21	
Toluene	<0.00200	0.100	0.0759	76	0.0935	94	70-130	21	35	mg/kg	01.15.20 01:21	
Ethylbenzene	<0.00200	0.100	0.0701	70	0.0894	90	71-129	24	35	mg/kg	01.15.20 01:21	X
m,p-Xylenes	<0.00401	0.200	0.143	72	0.173	87	70-135	19	35	mg/kg	01.15.20 01:21	
o-Xylene	<0.00200	0.100	0.0694	69	0.0970	97	71-133	33	35	mg/kg	01.15.20 01:21	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		107		70-130	%	01.15.20 01:21
4-Bromofluorobenzene	106		109		70-130	%	01.15.20 01:21

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

Final 1.000

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 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) 689-6701
www.xenco.com

Work Order No: 449014

Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, Co 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com tabyers@ltenv.com

Work Order Comments

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

Project Name:	RDU 11	Turn Around	
Project Number:	034819071	Routine ☐	
Project Location	Rural Eddy County	Rush: 24 HR	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-5698	Quote #:	

SAMPLE RECEIPT	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Temperature (°C):	1.2	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	3

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	FS06A	S	1/14/20	1345	4.5'	1	X	X	X	
	FS08A	S	1/14/20	1350	5'	1	X	X	X	
	SW10	S	1/14/20	1355	0-5'	1	X	X	X	

Preservative Codes

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

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		1/14/20 15:30	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.14.2020 03.30.00 PM

Work Order #: 649014

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 01.14.2020

Checklist reviewed by: Jessica Kramer Date: 01.15.2020

Jessica Kramer