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	NAB1928833879
District RP	2RP-5666
Facility ID	
Application ID	pAB1928833566

Release Notification

ATYBU-190927-C-1410

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1928833879
Contact mailing address 522 W. Mermod, Calsbad, NM 88220	

Location of Release Source

Latitude 32.127309 Longitude -103.926767
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Muy Wayno 18 CTB	Site Type Battery
Date Release Discovered 09/14/2019	API# *(if applicable)* *30-015-44838 (Muy Wayno 18 Fed #102 H)*

Unit Letter	Section	Township	Range	County
L	18	25S	30E	EDDY

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 15.07	Volume Recovered (bbls) 15.00
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Seal leaked on circulating pump on oil tanks. Vacuum truck recovered 14.5 BO from containment and 0.5 BO was recovered from soil outside of containment.
Additional third party resources have been retained to assist in the remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1928833879
District RP	2RP-5666
Facility ID	
Application ID	pAB1928833566

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? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

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

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

N/A

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 9-27-19

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

OCD Only

Received by: *Amalia Bustamante* Date: *10/15/2019*

State of New Mexico
Oil Conservation Division

Incident ID	NAB1928833879
District RP	2RP-5666
Facility ID	
Application ID	pAB1928833566

Site Assessment/Characterization

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

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

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1928833879
District RP	2RP-5666
Facility ID	
Application ID	pAB1928833566

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Coordinator_____

Signature:_____ _____ Date: 02-13-2020

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

OCD Only

Received by: _____ Date: _____

Incident ID	NAB1928833879
District RP	2RP-5666
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Application ID	pAB1928833566

Remediation Plan

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

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

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

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Coordinator_____

Signature:_____ _____ Date: 02/13/2020

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

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

A proud member of WSP

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

February 13, 2020

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

RE: Deferral Request
Muy Wayno 18 CTB
Remediation Permit Number 2RP-5666
Incident ID: NAB1928833879
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request detailing site assessment, soil sampling, and remediation activities at the Muy Wayno 18 Central Tank Battery (CTB) (Site) in Unit L, Section 18, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to confirm the presence or absence of impact to soil by a release of crude oil at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, XTO is submitting this Deferral Request and requesting no further action (NFA) for Remediation Permit (RP) Number 2RP-566 until the Site is reconstructed, and/or the well pad is abandoned.

RELEASE BACKGROUND

On September 14, 2019, a seal on an oil tank circulating pump failed, resulting in the release 15.07 barrels (bbls) of crude oil outside the lined tank battery containment. The circulating pump, which was located within a separate lined containment, was isolated until repairs could be made. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 15 bbls of crude oil was recovered. The net volume of crude oil released was 0.07 bbls. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on September 27, 2019.

SITE CHARACTERIZATION

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

well with depth to groundwater data is United States Geological Survey (USGS) well 320857103553301, located approximately 1.5 miles north of the Site. The groundwater well has a reported depth to groundwater of 264 feet bgs and a total depth of 385 feet bgs. The closest continuously-flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 3,535 feet south of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area.

CLOSURE CRITERIA

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 20,000 mg/kg

SITE ASSESSMENT ACTIVITIES AND ANALYTICAL RESULTS

On October 4, 2019, LTE personnel conducted reconnaissance of the Site to evaluate the release extent. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS). The release occurred within the lined circulating pump containment, overflowing to the immediate east, south, and northwest areas of the lined containment. LTE personnel collected and field screened four preliminary soil assessment samples at four locations (SS01 through SS04) within the release extent. Locations of soil samples are presented on Figure 2.

The four soil samples were collected at a depth of 0.5 feet below grade surface (bgs). Initial assessment, delineation, and confirmation soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. All soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA)

Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following EPA Method 300.0.

According to laboratory analytical results, TPH-GRO, TPH-DRO, and TPH were reported at concentrations above the Closure Criteria in the preliminary assessment soil samples SS01, located adjacent to the east containment wall and SS03, located adjacent to the northwest corner of the containment wall. Soil concentrations in preliminary samples SS02 and SS04, collected to the west and northeast of the containment, were below Closure Criteria. Based on visible staining in the release areas, field screening results, and laboratory analytical results, soil delineation and excavation appeared to be warranted for the release area.

EXCAVATION AND DELINEATION SOIL SAMPLING ACTIVITIES

On December 6, 2019, LTE oversaw excavation activities to remediate impacted soil as indicated by visual observations, field screening results, and preliminary soil sample results. Excavation activities were performed using track-mounted backhoe and transport vehicle in the above referenced impacted areas (SS01 and SS03). The excavations were located adjacent to the eastern and northwestern edges of the circulating pump. Photographic documentation was conducted during the visit to the Site and is included in Attachment 2.

Following removal of impacted soil, LTE collected 5-point composite soil samples at least every 200 square feet from the sidewalls and floor of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. A total of two composite floor soil samples (FS01 and FS02) and two composite sidewall samples (SW01 and SW02) were collected from the excavations. Floor samples were collected at a depth of two feet bgs and sidewall samples were collected at depths of ground surface to two feet bgs. The excavation soil samples were collected, handled, and analyzed as described above. The locations of final excavation confirmation samples are presented on Figure 3.

The two excavation extents totaled approximately 20 square feet. A total of approximately four cubic yards of impacted soil were removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility located in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing.

In addition, delineation was conducted on December 6, 2020 in coordination with excavation activities to assist in confirming the presence or absence of impacted soil within the footprint of the release that could not be accessed for excavation. Visually impacted soil was located to the immediate south and west of the circulating pump containment. Five boreholes (BH01 through BH05) were advanced to a depth of two feet bgs and two discrete soil samples were collected from each borehole utilizing hand auger equipment. Delineation soil samples were collected at one foot and two feet bgs. Soil from the boreholes was field screened for volatile aromatic

hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 1. The locations of delineation boreholes (BH01 through BH05) are presented on Figure 4. The discrete delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. A sample could not be obtained from directly south of the circulating pump due to overhanging infrastructure visible in the photolog.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria at the completion of the excavation activities in all composite floor and sidewall soil samples. In addition, analytical results for the 10 soil samples from the five boreholes (BH01 through BH05) were below the Site Closure Criteria. The laboratory analytical results are summarized in Table 1 and the laboratory data reports are provided in Attachment 3.

DEFERRAL REQUEST

Elevated concentrations of TPH, TPH-GRO, and TPH-DRO which accumulated to the immediate northwest and east of the circulating pump containment were remediated by excavation samples. Approximately four cubic yards of impacted soil were excavated from the Site; however, impacted soil to the immediate south and west of the circulating pump containment was left in place for compliance with the XTO safety policy regarding earth-moving activities within two feet of active on-pad operating equipment and inability to access the impacted soil due to overhanging infrastructure. Impacted soil between the circulating pump and the tank containments could not be accessed due to these space limitations. Visual observations and field screening results indicated the impacted soil between the containments was similar in nature as was found in preliminary sample SS01 where TPH-GRO and TPH-DRO and TPH exceeded Closure Criteria.

Delineation soil samples BH01 to the west, BH02 to the north, BH03 to the east, BH04 between the excavations, and BH05 to the south of the tank battery containment confirm no impacted soil in other areas of the release footprint and outside of the release footprint. Laboratory analytical results for the soil samples indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, field screening of soil indicated volatile aromatic hydrocarbons and chloride concentrations were not elevated and soil staining and petroleum hydrocarbon odors were not identified within the release extent.

Based on initial response efforts, absence of elevated field screening results, and soil sample laboratory analytical results compliant with the Closure Criteria, approximately one cubic yard of residual impacted soil remains to the immediate south and west of circulating pump

containment. Due to the presence of equipment, attempts at hand shoveling and hydro-excavation in this limited area were unsuccessful. Therefore, XTO requests permission to backfill the onsite excavations and complete remediation of the remaining impacted soil during any future major construction or final abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in an imminent risk to human health, the environment, or groundwater.

XTO requests deferral of final remediation for RP Number 2RP-5666. Upon approval of this Deferral Request, XTO will backfill the on-pad excavations with material purchased locally and recontour the Site to match pre-existing Site conditions.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kevin M. Axe, P.G.
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Appendices:

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

FIGURES

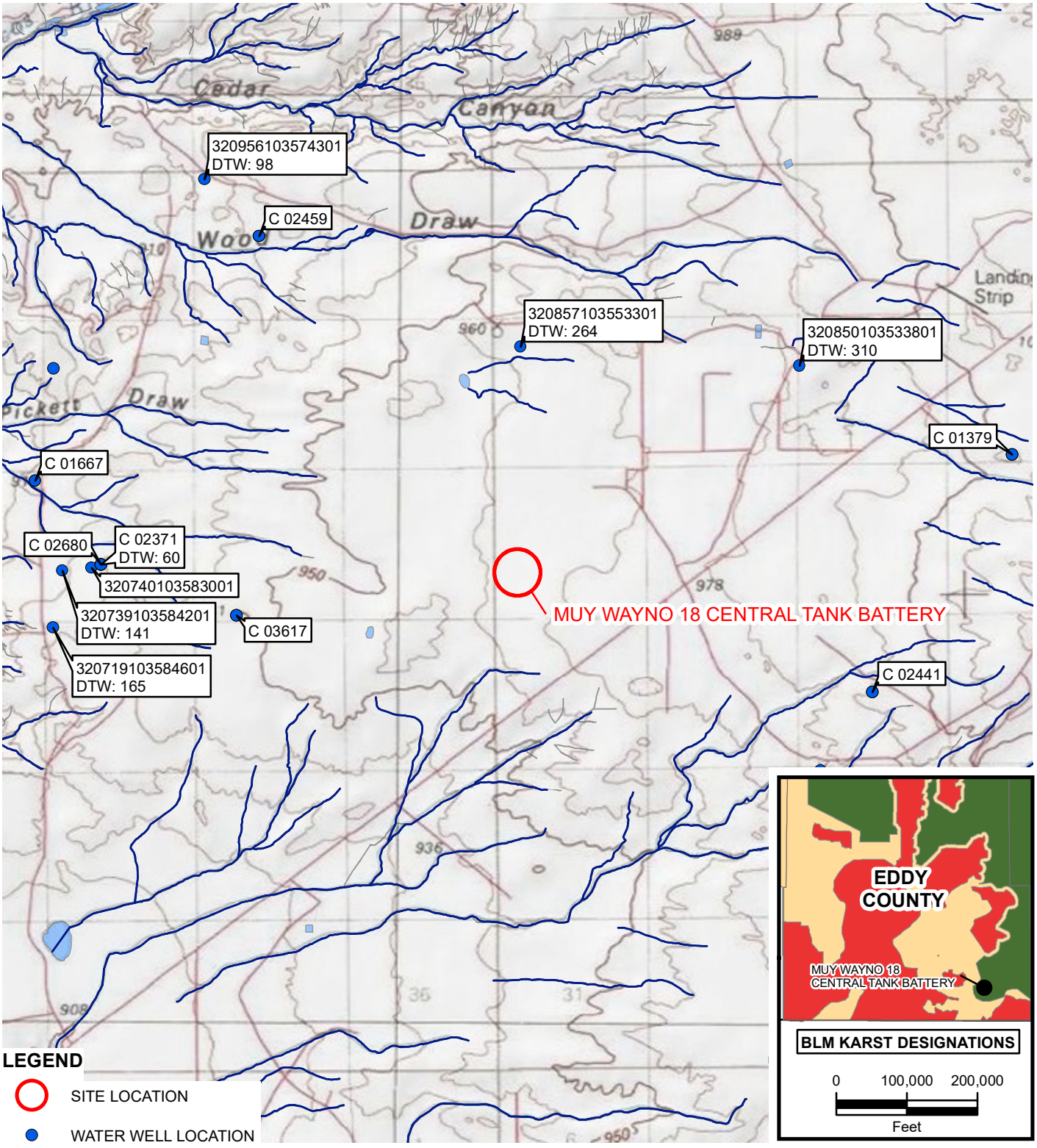


IMAGE COURTESY OF ESRI/USGS

LEGEND

- SITE LOCATION
- WATER WELL LOCATION
- NATIONAL HYDROGRAPHY DATASET SURFACE WATER FEATURE
- NATIONAL WETLANDS INVENTORY SURFACE WATER FEATURE
- LOW KARST
- MEDIUM KARST
- HIGH KARST

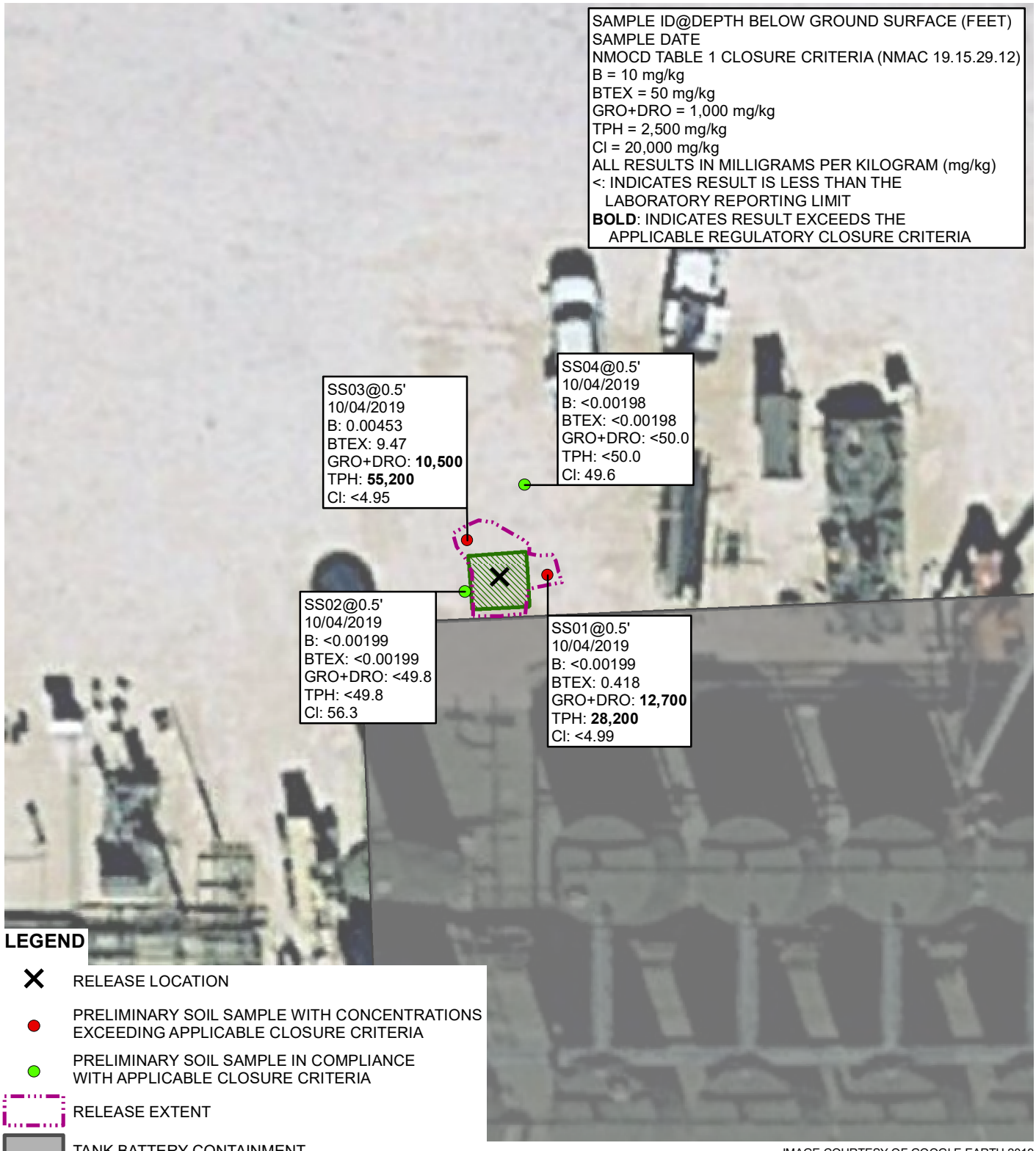
NOTE: REMEDIATION PERMIT NUMBER 2RP-5666
DTW: DEPTH TO WATER IN FEET

0 5,000 10,000
Feet

N

FIGURE 1
SITE LOCATION MAP
MUY WAYNO 18 CTB
UNIT L SEC 18 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

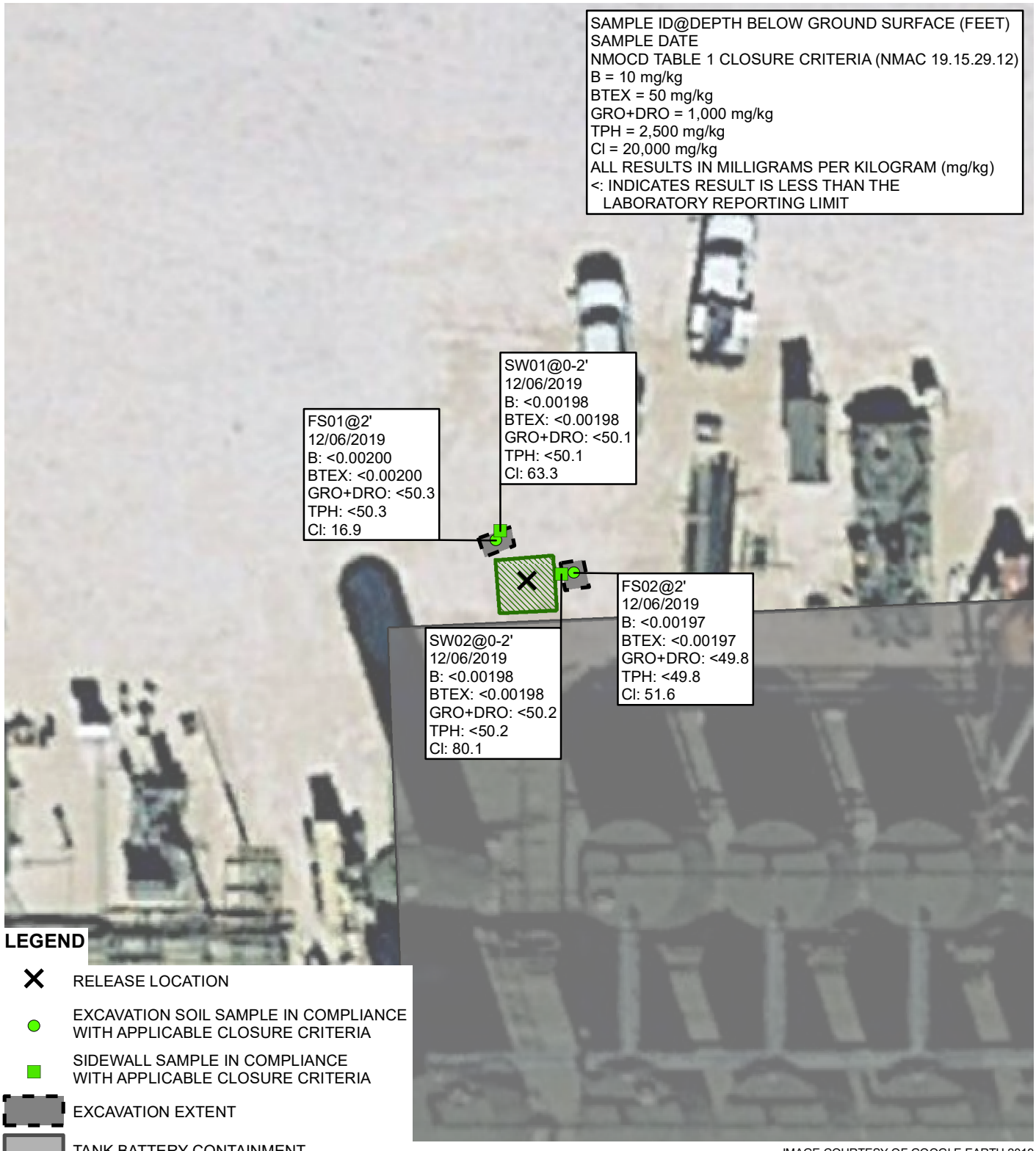
P:\XTO Energy\GIS\MXD\012919231_MUY WAYNO 18 CTB\012919231_FIG01_SL_5666.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5666

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
MUY WAYNO 18 CTB
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

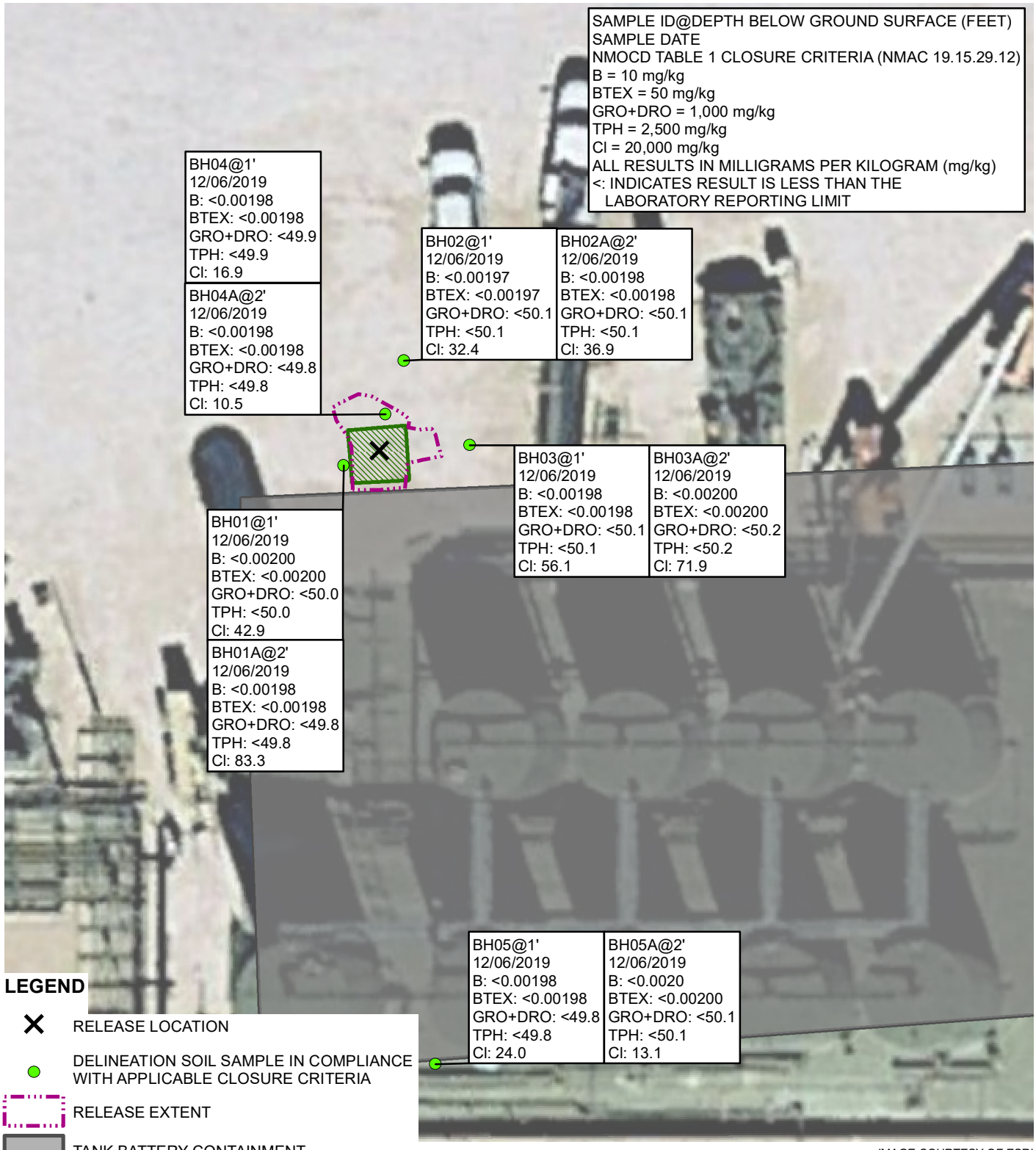
P:\XTO Energy\GIS\MXD\012919231_MUY WAYNO 18 CTB\012919231_FIG02_PRELIMINARY_5666.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5666

FIGURE 3
EXCAVATION SOIL SAMPLE LOCATIONS
MUY WAYNO 18 CTB
UNIT L SEC 18 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919231_MUY WAYNO 18 CTB\012919231_FIG03_EXCAVATION_5666.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5666

FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
MUY WAYNO 18 CTB
UNIT L SEC 18 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919231_MUY WAYNO 18 CTB\012919231_FIG04_DELINEATION_5666.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

MUY WAYNO 18 CTB
REMEDIATION PERMIT NUMBER (2RP-5666)
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	10/04/2019	<0.00199	0.0152	0.0182	0.385	0.418	312	12,400	1,260	**12,700**	**28,200**	<4.99
SS02	0.5	10/04/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	56.3
SS03	0.5	10/04/2019	0.00453	0.217	0.0667	9.18	9.47	732	9,790	4,840	**10,500**	**55,200**	<4.95
SS04	0.5	10/04/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	49.6
BH01	1	12/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	42.9
BH01A	2	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	83.3
BH02	1	12/06/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<50.1	<50.1	<50.1	<50.1	<50.1	32.4
BH02A	2	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	36.9
BH03	1	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	56.1
BH03A	2	12/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	71.9
BH04	1	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	16.9
BH04A	2	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	10.5
BH05	1	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	24.0
BH05A	2	12/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	13.1
FSO1	2	12/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	16.9
FS02	2	12/06/2019	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<49.8	<49.8	<49.8	<49.8	<49.8	51.6
SW01	0 - 2	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	63.3
SW02	0 - 2	12/06/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	80.1

Notes:

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

ATTACHMENT 1: LITHOLOGIC / SOIL SAMPLING LOGS

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

Identifier:	Date:
BH01	12/6/2019
MUY WAYNO 18 CTB	2RP-5666

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand Auger

Lat/Long: 32.127309, -103.926767	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.4	n	BH01	1	1'	GP	Poorly graded gravel-sand mixture w/ caliche, tan, no staining.
moist	<179	0.4	n	BH01 A	2	2'	SC	Poorly graded sands with clayey sands, red brown no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH02	12/6/2019
MUY WAYNO 18 CTB	2RP-5666

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand Auger

Lat/Long: 32.127309, -103.926767	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.2	n	BH02	1	1'	GP	Poorly graded gravel-sand mixture w/ caliche, tan, no staining.
moist	<179	0.8	n	BH02 A	2	2'	SC	Poorly graded sands with clayey sands, red brown no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH03	12/6/2019
MUY WAYNO 18 CTB	2RP-5666

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand Auger

Lat/Long: 32.127309, -103.926767	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.1	n	BH03	1	1'	GP	Poorly graded sands with clayey sands, red brown no odor
moist	<179	0.2	n	BH03 A	2	2'	SC	Poorly graded sands with clayey sands, red brown no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH04	12/6/2019
MUY WAYNO 18 CTB	2RP-5666

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand Auger

Lat/Long: 32.127309, -103.926767	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	2.3	n	BH04	1	1'	GP	Poorly graded sands with clayey sands, red brown no odor
moist	<179	1.5	n	BH04 A	2	2'	SC	Poorly graded sands with clayey sands, red brown no odor
								Total Depth 2 feet bgs

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

Identifier:	Date:
BH05	12/6/2019
MUY WAYNO 18 CTB	2RP-5666

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Hand Auger

Lat/Long: 32.127309, -103.926767	Field Screening: Chloride, TPH	Hole Diameter: 4"	Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<179	0.1	n	BH05	1	1'	SC	Poorly graded sands with clayey sands, red brown no odor
moist	<179	0.1	n	BH05 A	2	2'	SC	Poorly graded sands with clayey sands, red brown no odor

Total Depth 2 feet bgs

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of circulating pumps and containment.

Photograph 2: View of northwest excavation.

Photograph 3: View production equipment to south and west of release.

Photograph 4: View of residual soil impacts to west and south of pump.

Muy Wayno 18 CBT
Eddy County, NM
Photographs Taken: December 6,2019

A proud member of WSP

ATTACHMENT 3: LABORATORY ANALYTICAL RESULTS

Analytical Report 639157

for

LT Environmental, Inc.

Project Manager: Dan Moir

Muy Wayno CTB

012919231

14-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)

14-OCT-19

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

Reference: XENCO Report No(s): **639157**
Muy Wayno CTB
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) 639157. 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. 639157 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 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	10-04-19 15:00	0.5 ft	639157-001
SS02	S	10-04-19 15:07	0.5 ft	639157-002
SS03	S	10-04-19 15:11	0.5 ft	639157-003
SS04	S	10-04-19 15:16	0.5 ft	639157-004

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: Muy Wayno CTB

Project ID: *012919231*
Work Order Number(s): *639157*

Report Date: *14-OCT-19*
Date Received: *10/04/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104057 TPH by SW8015 Mod
Motor Oil Range Hydrocarbons (MRO) Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.
Samples in the analytical batch are: 639157-001, -002, -003, -004

Lab Sample ID 639157-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO) recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 639157-001, -002, -003, -004.
The Laboratory Control Sample for Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 639157-001 S.

Batch: LBA-3104085 BTEX by EPA 8021B
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.
Samples affected are: 639157-003,639157-001.

Certificate of Analysis Summary 639157

LT Environmental, Inc., Arvada, CO

Project Name: Muy Wayno CTB

Project Id: 012919231
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Oct-04-19 04:13 pm
Report Date: 14-OCT-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	639157-001		639157-002		639157-003		639157-004					
	Field Id:	SS01		SS02		SS03		SS04					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Oct-04-19 15:00		Oct-04-19 15:07		Oct-04-19 15:11		Oct-04-19 15:16					
BTEX by EPA 8021B SUB: T104704400-19-19	***Extracted:***	Oct-09-19 15:30		Oct-09-19 15:30		Oct-09-19 15:30		Oct-09-19 15:30					
	Analyzed:	Oct-12-19 16:07		Oct-12-19 16:27		Oct-12-19 16:48		Oct-12-19 17:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00199	0.00199	0.00453	0.00200	<0.00198	0.00198				
Toluene		0.0152	0.00199	<0.00199	0.00199	0.217	0.00200	<0.00198	0.00198				
Ethylbenzene		0.0182	0.00199	<0.00199	0.00199	0.0667	0.00200	<0.00198	0.00198				
m,p-Xylenes		0.292	0.00398	<0.00398	0.00398	8.89 D	0.100	<0.00397	0.00397				
o-Xylene		0.0930	0.00199	<0.00199	0.00199	0.294	0.00200	<0.00198	0.00198				
Total Xylenes		0.385	0.00199	<0.00199	0.00199	9.18	0.00200	<0.00198	0.00198				
Total BTEX		0.418	0.00199	<0.00199	0.00199	9.47	0.00200	<0.00198	0.00198				
Chloride by EPA 300 SUB: T104704400-19-19	***Extracted:***	Oct-08-19 16:20		Oct-08-19 16:20		Oct-08-19 16:20		Oct-08-19 16:20					
	Analyzed:	Oct-08-19 21:33		Oct-08-19 21:49		Oct-08-19 21:54		Oct-08-19 21:59					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.99	4.99	56.3	4.98	<4.95	4.95	49.6	5.04				
TPH by SW8015 Mod SUB: T104704400-19-19	***Extracted:***	Oct-10-19 09:00		Oct-10-19 09:00		Oct-10-19 09:00		Oct-10-19 09:00					
	Analyzed:	Oct-11-19 08:27		Oct-10-19 13:37		Oct-11-19 09:29		Oct-10-19 14:19					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		312	250	<49.8	49.8	732	250	<50.0	50.0				
Diesel Range Organics (DRO)		12400	250	<49.8	49.8	9790	250	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		1260	250	<49.8	49.8	4840	250	<50.0	50.0				
Total GRO-DRO		12700	250	<49.8	49.8	10500	250	<50.0	50.0				
Total TPH		28200	250	<49.8	49.8	55200	250	<50.0	50.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-001	Date Collected:	10.04.19 15.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.08.19 16.20	Basis:	Wet Weight
Seq Number:	3103713			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	10.08.19 21.33	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	10.10.19 09.00	Basis:	Wet Weight
Seq Number:	3104057			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**312**	250	mg/kg	10.11.19 08.27		5
Diesel Range Organics (DRO)	C10C28DRO	**12400**	250	mg/kg	10.11.19 08.27		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1260**	250	mg/kg	10.11.19 08.27		5
Total GRO-DRO	PHC628	**12700**	250	mg/kg	10.11.19 08.27		5
Total TPH	PHC635	**28200**	250	mg/kg	10.11.19 08.27		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	10.11.19 08.27	
o-Terphenyl	84-15-1	114	%	70-135	10.11.19 08.27	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-001	Date Collected:	10.04.19 15.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	10.09.19 15.30	Basis:	Wet Weight
Seq Number:	3104085			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.12.19 16.07	U	1
Toluene	108-88-3	**0.0152**	0.00199	mg/kg	10.12.19 16.07		1
Ethylbenzene	100-41-4	**0.0182**	0.00199	mg/kg	10.12.19 16.07		1
m,p-Xylenes	179601-23-1	**0.292**	0.00398	mg/kg	10.12.19 16.07		1
o-Xylene	95-47-6	**0.0930**	0.00199	mg/kg	10.12.19 16.07		1
Total Xylenes	1330-20-7	**0.385**	0.00199	mg/kg	10.12.19 16.07		1
Total BTEX		**0.418**	0.00199	mg/kg	10.12.19 16.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	186	%	70-130	10.12.19 16.07	**
1,4-Difluorobenzene	540-36-3	89	%	70-130	10.12.19 16.07	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-002	Date Collected:	10.04.19 15.07	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.08.19 16.20	Basis:	Wet Weight
Seq Number:	3103713			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.3**	4.98	mg/kg	10.08.19 21.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	10.10.19 09.00	Basis:	Wet Weight
Seq Number:	3104057			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.10.19 13.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.10.19 13.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.10.19 13.37	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.10.19 13.37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.10.19 13.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	10.10.19 13.37	
o-Terphenyl	84-15-1	114	%	70-135	10.10.19 13.37	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-002	Date Collected:	10.04.19 15.07	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	10.09.19 15.30	Basis:	Wet Weight
Seq Number:	3104085			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.12.19 16.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.12.19 16.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	130	%	70-130	10.12.19 16.27	
1,4-Difluorobenzene	540-36-3	92	%	70-130	10.12.19 16.27	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-003	Date Collected:	10.04.19 15.11	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.08.19 16.20	Basis:	Wet Weight
Seq Number:	3103713			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	10.08.19 21.54	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	10.10.19 09.00	Basis:	Wet Weight
Seq Number:	3104057			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**732**	250	mg/kg	10.11.19 09.29		5
Diesel Range Organics (DRO)	C10C28DRO	**9790**	250	mg/kg	10.11.19 09.29		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**4840**	250	mg/kg	10.11.19 09.29		5
Total GRO-DRO	PHC628	**10500**	250	mg/kg	10.11.19 09.29		5
Total TPH	PHC635	**55200**	250	mg/kg	10.11.19 09.29		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	10.11.19 09.29	
o-Terphenyl	84-15-1	109	%	70-135	10.11.19 09.29	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-003	Date Collected:	10.04.19 15.11	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	10.09.19 15.30	Basis:	Wet Weight
Seq Number:	3104085			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.00453**	0.00200	mg/kg	10.12.19 16.48		1
Toluene	108-88-3	**0.217**	0.00200	mg/kg	10.12.19 16.48		1
Ethylbenzene	100-41-4	**0.0667**	0.00200	mg/kg	10.12.19 16.48		1
m,p-Xylenes	179601-23-1	**8.89**	0.100	mg/kg	10.13.19 23.45	D	25
o-Xylene	95-47-6	**0.294**	0.00200	mg/kg	10.12.19 16.48		1
Total Xylenes	1330-20-7	**9.18**	0.00200	mg/kg	10.13.19 23.45		25
Total BTEX		**9.47**	0.00200	mg/kg	10.13.19 23.45		25

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	322	%	70-130	10.12.19 16.48	**
1,4-Difluorobenzene	540-36-3	115	%	70-130	10.12.19 16.48	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-004	Date Collected:	10.04.19 15.16	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	10.08.19 16.20	Basis:	Wet Weight
Seq Number:	3103713			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**49.6**	5.04	mg/kg	10.08.19 21.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	DVM	Date Prep:	10.10.19 09.00	Basis:	Wet Weight
Seq Number:	3104057			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.10.19 14.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.10.19 14.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.10.19 14.19	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.10.19 14.19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.10.19 14.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	10.10.19 14.19	
o-Terphenyl	84-15-1	118	%	70-135	10.10.19 14.19	

Certificate of Analytical Results 639157

LT Environmental, Inc., Arvada, CO

Muy Wayno CTB

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	10.04.19 16.13
Lab Sample Id:	639157-004	Date Collected:	10.04.19 15.16	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	10.09.19 15.30	Basis:	Wet Weight
Seq Number:	3104085			SUB:	T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.12.19 17.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.12.19 17.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	10.12.19 17.08	
4-Bromofluorobenzene	460-00-4	121	%	70-130	10.12.19 17.08	

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 639157

LT Environmental, Inc.

Muy Wayno CTB

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103713 — Matrix: Solid — Date Prep: 10.08.19
MB Sample Id: 7687723-1-BLK — LCS Sample Id: 7687723-1-BKS — LCSD Sample Id: 7687723-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	252	101	241	96	90-110	4	20	mg/kg	10.08.19 19:47	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103713 — Matrix: Soil — Date Prep: 10.08.19
Parent Sample Id: 639118-004 — MS Sample Id: 639118-004 S — MSD Sample Id: 639118-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.29	248	248	97	250	98	90-110	1	20	mg/kg	10.08.19 20:03	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3103713 — Matrix: Soil — Date Prep: 10.08.19
Parent Sample Id: 639155-002 — MS Sample Id: 639155-002 S — MSD Sample Id: 639155-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	358	249	586	92	582	90	90-110	1	20	mg/kg	10.08.19 21:17	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104057 — Matrix: Solid — Date Prep: 10.10.19
MB Sample Id: 7687881-1-BLK — LCS Sample Id: 7687881-1-BKS — LCSD Sample Id: 7687881-1-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)	<15.0	1000	1020	102	1180	118	70-135	15	20	mg/kg	10.10.19 11:53	
Diesel Range Organics (DRO)	<15.0	1000	971	97	1110	111	70-135	13	20	mg/kg	10.10.19 11:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	92		94		106		70-135	%	10.10.19 11:53
o-Terphenyl	94		89		104		70-135	%	10.10.19 11:53

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104057 — Matrix: Solid — Date Prep: 10.10.19
MB Sample Id: 7687881-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.10.19 11:32	

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

QC Summary 639157

LT Environmental, Inc.

Muy Wayno CTB

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3104057 — Matrix: Soil — Date Prep: 10.10.19
Parent Sample Id: 639157-001 — MS Sample Id: 639157-001 S — MSD Sample Id: 639157-001 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)	312	997	1130	82	1120	81	70-135	1	20	mg/kg	10.11.19 08:48	
Diesel Range Organics (DRO)	12400	997	12300	0	11700	0	70-135	5	20	mg/kg	10.11.19 08:48	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	150	**	109		70-135	%	10.11.19 08:48
o-Terphenyl	120		117		70-135	%	10.11.19 08:48

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104085 — Matrix: Solid — Date Prep: 10.09.19
MB Sample Id: 7687990-1-BLK — LCS Sample Id: 7687990-1-BKS — LCSD Sample Id: 7687990-1-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	0.0769	77	0.0752	75	70-130	2	35	mg/kg	10.12.19 07:14	
Toluene	<0.00200	0.100	0.0819	82	0.0804	80	70-130	2	35	mg/kg	10.12.19 07:14	
Ethylbenzene	<0.00200	0.100	0.0887	89	0.0871	87	70-130	2	35	mg/kg	10.12.19 07:14	
m,p-Xylenes	<0.00400	0.200	0.176	88	0.172	86	70-130	2	35	mg/kg	10.12.19 07:14	
o-Xylene	<0.00200	0.100	0.0929	93	0.0924	92	70-130	1	35	mg/kg	10.12.19 07:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		90		91		70-130	%	10.12.19 07:14
4-Bromofluorobenzene	98		103		109		70-130	%	10.12.19 07:14

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3104085 — Matrix: Soil — Date Prep: 10.09.19
Parent Sample Id: 639118-001 — MS Sample Id: 639118-001 S — MSD Sample Id: 639118-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0659	66	0.0731	73	70-130	10	35	mg/kg	10.12.19 07:54	X
Toluene	<0.00198	0.0992	0.0719	72	0.0810	81	70-130	12	35	mg/kg	10.12.19 07:54	
Ethylbenzene	<0.00198	0.0992	0.0782	79	0.0876	88	70-130	11	35	mg/kg	10.12.19 07:54	
m,p-Xylenes	<0.00397	0.198	0.153	77	0.171	86	70-130	11	35	mg/kg	10.12.19 07:54	
o-Xylene	<0.00198	0.0992	0.0809	82	0.0901	90	70-130	11	35	mg/kg	10.12.19 07:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	10.12.19 07:54
4-Bromofluorobenzene	110		116		70-130	%	10.12.19 07:54

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

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

Work Order No: 1639157

Page 1 of 1

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

Work Order Comments

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

Project Name:	Muy Wayno CTB	Turn Around	
Project Number:	01241923 1	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	~~Benjamin Belill~~ Luis Del Val	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.2	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:	4

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	10/4/19	1500	.5'	1	X	X	X
SS02	↓	↓	1507	↓	↓	↓	↓	↓
SS03			1511					
SS04			1516					

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Luis Del Val	Robert Magee	10/4/19 @ 1600	2 Robert Magee		10/4/19 10:23
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **49465**

Date/Time: 10/07/19 10:45
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.:

Please send report to: Jessica Kramer
Address: 1089 N Canal Street
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639157-001	S	SS01	10/04/19 15:00	SW8015MOD_NM	TPH by SW8015 Mod	10/10/19	10/18/19	JKR	GRO-DRO PHCC10C28 PI	
639157-001	S	SS01	10/04/19 15:00	SW8021B	BTEX by EPA 8021B	10/10/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
639157-001	S	SS01	10/04/19 15:00	E300_CL	Chloride by EPA 300	10/10/19	04/01/20	JKR	CL	
639157-002	S	SS02	10/04/19 15:07	SW8021B	BTEX by EPA 8021B	10/10/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
639157-002	S	SS02	10/04/19 15:07	SW8015MOD_NM	TPH by SW8015 Mod	10/10/19	10/18/19	JKR	GRO-DRO PHCC10C28 PI	
639157-002	S	SS02	10/04/19 15:07	E300_CL	Chloride by EPA 300	10/10/19	04/01/20	JKR	CL	
639157-003	S	SS03	10/04/19 15:11	SW8021B	BTEX by EPA 8021B	10/10/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
639157-003	S	SS03	10/04/19 15:11	SW8015MOD_NM	TPH by SW8015 Mod	10/10/19	10/18/19	JKR	GRO-DRO PHCC10C28 PI	
639157-003	S	SS03	10/04/19 15:11	E300_CL	Chloride by EPA 300	10/10/19	04/01/20	JKR	CL	
639157-004	S	SS04	10/04/19 15:16	SW8021B	BTEX by EPA 8021B	10/10/19	10/18/19	JKR	BR4FBZ BZ BZME EBZ X	
639157-004	S	SS04	10/04/19 15:16	E300_CL	Chloride by EPA 300	10/10/19	04/01/20	JKR	CL	
639157-004	S	SS04	10/04/19 15:16	SW8015MOD_NM	TPH by SW8015 Mod	10/10/19	10/18/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 10/07/2019

Received By: Brianna Teel

Date Received: 10/08/2019 13:35

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 49465

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : R8

Sent By: Elizabeth McClellan **Date Sent:** 10/07/2019 10:45 AM

Received By: Brianna Teel **Date Received:** 10/08/2019 01:35 PM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.4	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: Brianna Teel Date: 10/08/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/04/2019 04:13:00 PM

Work Order #: 639157

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	.2	
#2 *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)?	**Yes**	Subbed Midland.
#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: 10/07/2019

Checklist reviewed by: Jessica Kramer Date: 10/07/2019

Jessica Kramer

Analytical Report 645471

for

LT Environmental, Inc.

Project Manager: Dan Moir

MUY Wayno 18 CTB

012919231

09-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)

09-DEC-19

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

Reference: XENCO Report No(s): **645471**
MUY Wayno 18 CTB
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) 645471. 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. 645471 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 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FSO1	S	12-06-19 10:09	2 ft	645471-001
SW01	S	12-06-19 10:11	0 - 2 ft	645471-002
FS02	S	12-06-19 10:24	2 ft	645471-003
SW02	S	12-06-19 10:35	0 - 2 ft	645471-004
BH01	S	12-06-19 10:47	1 ft	645471-005
BH01A	S	12-06-19 10:53	2 ft	645471-006
BH02	S	12-06-19 10:54	1 ft	645471-007
BH02A	S	12-06-19 10:51	2 ft	645471-008
BH03	S	12-06-19 12:22	1 ft	645471-009
BH03A	S	12-06-19 12:25	2 ft	645471-010
BH04	S	12-06-19 12:40	1 ft	645471-011
BH04A	S	12-06-19 12:43	2 ft	645471-012
BH05	S	12-06-19 13:05	0 ft	645471-013
BH05A	S	12-06-19 13:07	0 ft	645471-014

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: MUY Wayno 18 CTB

Project ID: *012919231*
Work Order Number(s): *645471*

Report Date: *09-DEC-19*
Date Received: *12/06/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3109724 Chloride by EPA 300
Lab Sample ID 645471-011 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: 645471-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3109727 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 645471

LT Environmental, Inc., Arvada, CO

Project Name: MUY Wayno 18 CTB

Project Id: 012919231
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Dec-06-19 04:40 pm
Report Date: 09-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645471-001		645471-002		645471-003		645471-004		645471-005		645471-006	
	Field Id:	FSO1		SW01		FS02		SW02		BH01		BH01A	
	Depth:	2- ft		0-2 ft		2- ft		0-2 ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-06-19 10:09		Dec-06-19 10:11		Dec-06-19 10:24		Dec-06-19 10:35		Dec-06-19 10:47		Dec-06-19 10:53	
BTEX by EPA 8021B	***Extracted:***	Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18	
	Analyzed:	Dec-06-19 22:46		Dec-06-19 23:03		Dec-06-19 23:21		Dec-06-19 23:38		Dec-06-19 23:55		Dec-07-19 00:13	
	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	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
m,p-Xylenes		<0.00401	0.00401	<0.00396	0.00396	<0.00394	0.00394	<0.00397	0.00397	<0.00401	0.00401	<0.00395	0.00395
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35	
	Analyzed:	Dec-07-19 10:53		Dec-07-19 11:10		Dec-07-19 11:16		Dec-07-19 11:21		Dec-07-19 11:27		Dec-07-19 11:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		16.9	9.94	63.3	9.98	51.6	9.90	80.1	9.92	42.9	9.98	83.3	9.88
TPH by SW8015 Mod	***Extracted:***	Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00	
	Analyzed:	Dec-07-19 05:47		Dec-07-19 06:27		Dec-07-19 06:27		Dec-07-19 06:46		Dec-07-19 06:46		Dec-07-19 07:06	
	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	<49.8	49.8	<50.2	50.2	<50.0	50.0	<49.8	49.8
Diesel Range Organics (DRO)		<50.3	50.3	<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.0	50.0	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.0	50.0	<49.8	49.8
Total GRO-DRO		<50.3	50.3	<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.0	50.0	<49.8	49.8
Total TPH		<50.3	50.3	<50.1	50.1	<49.8	49.8	<50.2	50.2	<50.0	50.0	<49.8	49.8

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645471

LT Environmental, Inc., Arvada, CO

Project Name: MUY Wayno 18 CTB

Project Id: 012919231
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Dec-06-19 04:40 pm
Report Date: 09-DEC-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	645471-007		645471-008		645471-009		645471-010		645471-011		645471-012	
	Field Id:	BH02		BH02A		BH03		BH03A		BH04		BH04A	
	Depth:	1- ft		2- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-06-19 10:54		Dec-06-19 10:51		Dec-06-19 12:22		Dec-06-19 12:25		Dec-06-19 12:40		Dec-06-19 12:43	
BTEX by EPA 8021B	***Extracted:***	Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18		Dec-06-19 18:18	
	Analyzed:	Dec-07-19 00:30		Dec-07-19 00:48		Dec-07-19 01:05		Dec-07-19 01:22		Dec-07-19 02:32		Dec-07-19 02:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Toluene		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Ethylbenzene		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
m,p-Xylenes		<0.00394	0.00394	<0.00397	0.00397	<0.00397	0.00397	<0.00399	0.00399	<0.00396	0.00396	<0.00397	0.00397
o-Xylene		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total Xylenes		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Total BTEX		<0.00197	0.00197	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198
Chloride by EPA 300	***Extracted:***	Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35		Dec-06-19 17:35	
	Analyzed:	Dec-07-19 11:50		Dec-07-19 11:56		Dec-07-19 12:02		Dec-07-19 12:08		Dec-07-19 12:14		Dec-07-19 12:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		32.4	10.0	36.9	9.88	56.1	10.0	71.9	10.0	16.9	9.88	10.5	9.90
TPH by SW8015 Mod	***Extracted:***	Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00		Dec-06-19 17:00	
	Analyzed:	Dec-07-19 07:06		Dec-07-19 07:26		Dec-07-19 07:26		Dec-07-19 07:46		Dec-07-19 08:06		Dec-07-19 08:06	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.9	49.9	<49.8	49.8
Diesel Range Organics (DRO)		<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.9	49.9	<49.8	49.8
Total GRO-DRO		<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.9	49.9	<49.8	49.8
Total TPH		<50.1	50.1	<50.1	50.1	<50.1	50.1	<50.2	50.2	<49.9	49.9	<49.8	49.8

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 645471

LT Environmental, Inc., Arvada, CO

Project Name: MUY Wayno 18 CTB

Project Id: 012919231
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Dec-06-19 04:40 pm
Report Date: 09-DEC-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	645471-013		645471-014					
	Field Id:	BH05		BH05A					
	Depth:	0- ft		0- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Dec-06-19 13:05		Dec-06-19 13:07					
BTEX by EPA 8021B	***Extracted:***	Dec-06-19 18:18		Dec-06-19 18:18					
	Analyzed:	Dec-07-19 03:06		Dec-07-19 03:24					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200				
Toluene		<0.00198	0.00198	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200				
m,p-Xylenes		<0.00396	0.00396	<0.00399	0.00399				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200				
Total BTEX		<0.00198	0.00198	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	Dec-06-19 17:35		Dec-06-19 17:35					
	Analyzed:	Dec-07-19 12:37		Dec-07-19 12:54					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		24.0	9.98	13.1	9.96				
TPH by SW8015 Mod	***Extracted:***	Dec-06-19 17:00		Dec-06-19 17:00					
	Analyzed:	Dec-07-19 08:26		Dec-07-19 08:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<50.1	50.1				
Diesel Range Organics (DRO)		<49.8	49.8	<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<50.1	50.1				
Total GRO-DRO		<49.8	49.8	<50.1	50.1				
Total TPH		<49.8	49.8	<50.1	50.1				

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**FSO1**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-001	Date Collected:	12.06.19 10.09	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.9**	9.94	mg/kg	12.07.19 10.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	12.07.19 05.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	12.07.19 05.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	12.07.19 05.47	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	12.07.19 05.47	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	12.07.19 05.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.07.19 05.47	
o-Terphenyl	84-15-1	109	%	70-135	12.07.19 05.47	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**FSO1**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-001	Date Collected:	12.06.19 10.09	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.06.19 22.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.06.19 22.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.06.19 22.46	
4-Bromofluorobenzene	460-00-4	101	%	70-130	12.06.19 22.46	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-002	Date Collected:	12.06.19 10.11	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**63.3**	9.98	mg/kg	12.07.19 11.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.07.19 06.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.07.19 06.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.07.19 06.27	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.07.19 06.27	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.07.19 06.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.07.19 06.27	
o-Terphenyl	84-15-1	107	%	70-135	12.07.19 06.27	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-002	Date Collected:	12.06.19 10.11	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.06.19 23.03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.06.19 23.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.06.19 23.03	
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.06.19 23.03	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-003	Date Collected:	12.06.19 10.24	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.6**	9.90	mg/kg	12.07.19 11.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.07.19 06.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.07.19 06.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.07.19 06.27	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.07.19 06.27	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.07.19 06.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.07.19 06.27	
o-Terphenyl	84-15-1	109	%	70-135	12.07.19 06.27	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-003	Date Collected:	12.06.19 10.24	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	12.06.19 23.21	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1
Total BTEX		<0.00197	0.00197	mg/kg	12.06.19 23.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.06.19 23.21	
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.06.19 23.21	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-004	Date Collected:	12.06.19 10.35	Sample Depth:	0 - 2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.1**	9.92	mg/kg	12.07.19 11.21		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.07.19 06.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.07.19 06.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.07.19 06.46	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.07.19 06.46	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.07.19 06.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.07.19 06.46	
o-Terphenyl	84-15-1	102	%	70-135	12.07.19 06.46	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-004	Date Collected:	12.06.19 10.35	Sample Depth:	0 - 2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.06.19 23.38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.06.19 23.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.06.19 23.38	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.06.19 23.38	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-005	Date Collected:	12.06.19 10.47	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**42.9**	9.98	mg/kg	12.07.19 11.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.07.19 06.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.07.19 06.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.07.19 06.46	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.07.19 06.46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.07.19 06.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.07.19 06.46	
o-Terphenyl	84-15-1	111	%	70-135	12.07.19 06.46	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-005	Date Collected:	12.06.19 10.47	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.06.19 23.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.06.19 23.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.06.19 23.55	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.06.19 23.55	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-006	Date Collected:	12.06.19 10.53	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**83.3**	9.88	mg/kg	12.07.19 11.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.07.19 07.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.07.19 07.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.07.19 07.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.07.19 07.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.07.19 07.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	12.07.19 07.06	
o-Terphenyl	84-15-1	103	%	70-135	12.07.19 07.06	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-006	Date Collected:	12.06.19 10.53	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	12.07.19 00.13	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	12.07.19 00.13	
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.07.19 00.13	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-007	Date Collected:	12.06.19 10.54	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**32.4**	10.0	mg/kg	12.07.19 11.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.07.19 07.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.07.19 07.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.07.19 07.06	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.07.19 07.06	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.07.19 07.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	12.07.19 07.06	
o-Terphenyl	84-15-1	109	%	70-135	12.07.19 07.06	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-007	Date Collected:	12.06.19 10.54	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	12.07.19 00.30	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1
Total BTEX		<0.00197	0.00197	mg/kg	12.07.19 00.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.07.19 00.30	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.07.19 00.30	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-008	Date Collected:	12.06.19 10.51	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.9**	9.88	mg/kg	12.07.19 11.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.07.19 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.07.19 07.26	
o-Terphenyl	84-15-1	98	%	70-135	12.07.19 07.26	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-008	Date Collected:	12.06.19 10.51	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.07.19 00.48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 00.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.07.19 00.48	
1,4-Difluorobenzene	540-36-3	104	%	70-130	12.07.19 00.48	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-009	Date Collected:	12.06.19 12.22	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.1**	10.0	mg/kg	12.07.19 12.02		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.07.19 07.26	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.07.19 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	12.07.19 07.26	
o-Terphenyl	84-15-1	105	%	70-135	12.07.19 07.26	

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MUY Wayno 18 CTB

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-009	Date Collected:	12.06.19 12.22	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.07.19 01.05	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 01.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.07.19 01.05	
4-Bromofluorobenzene	460-00-4	100	%	70-130	12.07.19 01.05	

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LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-010	Date Collected:	12.06.19 12.25	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**71.9**	10.0	mg/kg	12.07.19 12.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.07.19 07.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.07.19 07.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.07.19 07.46	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.07.19 07.46	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.07.19 07.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	12.07.19 07.46	
o-Terphenyl	84-15-1	99	%	70-135	12.07.19 07.46	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-010	Date Collected:	12.06.19 12.25	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.07.19 01.22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.07.19 01.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.07.19 01.22	
4-Bromofluorobenzene	460-00-4	106	%	70-130	12.07.19 01.22	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-011	Date Collected:	12.06.19 12.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16.9**	9.88	mg/kg	12.07.19 12.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.07.19 08.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.07.19 08.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.07.19 08.06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.07.19 08.06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.07.19 08.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	12.07.19 08.06	
o-Terphenyl	84-15-1	102	%	70-135	12.07.19 08.06	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-011	Date Collected:	12.06.19 12.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.07.19 02.32	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 02.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	12.07.19 02.32	
1,4-Difluorobenzene	540-36-3	95	%	70-130	12.07.19 02.32	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-012	Date Collected:	12.06.19 12.43	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.5**	9.90	mg/kg	12.07.19 12.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.07.19 08.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.07.19 08.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.07.19 08.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.07.19 08.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.07.19 08.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	12.07.19 08.06	
o-Terphenyl	84-15-1	109	%	70-135	12.07.19 08.06	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-012	Date Collected:	12.06.19 12.43	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	12.07.19 02.49	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 02.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.07.19 02.49	
4-Bromofluorobenzene	460-00-4	99	%	70-130	12.07.19 02.49	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-013	Date Collected:	12.06.19 13.05	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.0**	9.98	mg/kg	12.07.19 12.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.07.19 08.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.07.19 08.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.07.19 08.26	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.07.19 08.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.07.19 08.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	12.07.19 08.26	
o-Terphenyl	84-15-1	99	%	70-135	12.07.19 08.26	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-013	Date Collected:	12.06.19 13.05	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	12.07.19 03.06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	12.07.19 03.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	12.07.19 03.06	
4-Bromofluorobenzene	460-00-4	102	%	70-130	12.07.19 03.06	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-014	Date Collected:	12.06.19 13.07	Sample Depth:	0 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 17.35	Basis:	Wet Weight
Seq Number:	3109724				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.1**	9.96	mg/kg	12.07.19 12.54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.06.19 17.00	Basis:	Wet Weight
Seq Number:	3109785				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	12.07.19 08.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	12.07.19 08.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	12.07.19 08.26	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	12.07.19 08.26	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	12.07.19 08.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	12.07.19 08.26	
o-Terphenyl	84-15-1	105	%	70-135	12.07.19 08.26	

Certificate of Analytical Results 645471

LT Environmental, Inc., Arvada, CO

MUY Wayno 18 CTB

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	12.06.19 16.40
Lab Sample Id:	645471-014	Date Collected:	12.06.19 13.07	Sample Depth:	0 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.06.19 18.18	Basis:	Wet Weight
Seq Number:	3109727				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.07.19 03.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.07.19 03.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	12.07.19 03.24	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.07.19 03.24	

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 645471

LT Environmental, Inc.

MUY Wayno 18 CTB

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3109724 Matrix: Solid Date Prep: 12.06.19
MB Sample Id: 7691890-1-BLK LCS Sample Id: 7691890-1-BKS LCSD Sample Id: 7691890-1-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	261	104	260	104	90-110	0	20	mg/kg	12.07.19 10:41	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3109724 Matrix: Soil Date Prep: 12.06.19
Parent Sample Id: 645471-001 MS Sample Id: 645471-001 S MSD Sample Id: 645471-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.9	200	238	111	247	116	90-110	4	20	mg/kg	12.07.19 10:58	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3109724 Matrix: Soil Date Prep: 12.06.19
Parent Sample Id: 645471-011 MS Sample Id: 645471-011 S MSD Sample Id: 645471-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.9	200	223	103	224	105	90-110	0	20	mg/kg	12.07.19 12:19	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3109785 Matrix: Solid Date Prep: 12.06.19
MB Sample Id: 7691885-1-BLK LCS Sample Id: 7691885-1-BKS LCSD Sample Id: 7691885-1-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	768	77	775	78	70-135	1	35	mg/kg	12.07.19 05:27	
Diesel Range Organics (DRO)	<50.0	1000	779	78	754	75	70-135	3	35	mg/kg	12.07.19 05:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		107		108		70-135	%	12.07.19 05:27
o-Terphenyl	102		123		108		70-135	%	12.07.19 05:27

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3109785 Matrix: Solid Date Prep: 12.06.19
MB Sample Id: 7691885-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.07.19 05:27	

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

QC Summary 645471

LT Environmental, Inc.

MUY Wayno 18 CTB

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3109785 Matrix: Soil Date Prep: 12.06.19
Parent Sample Id: 645471-001 MS Sample Id: 645471-001 S MSD Sample Id: 645471-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	1020	102	925	93	70-135	10	35	mg/kg	12.07.19 06:07	
Diesel Range Organics (DRO)	<49.9	997	1220	122	1150	116	70-135	6	35	mg/kg	12.07.19 06:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		120		70-135	%	12.07.19 06:07
o-Terphenyl	125		121		70-135	%	12.07.19 06:07

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3109698 Matrix: Solid Date Prep: 12.06.19
MB Sample Id: 7691894-1-BLK LCS Sample Id: 7691894-1-BKS LCSD Sample Id: 7691894-1-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	0.0962	96	0.102	102	70-130	6	35	mg/kg	12.06.19 21:02	
Toluene	<0.00200	0.100	0.0952	95	0.100	100	70-130	5	35	mg/kg	12.06.19 21:02	
Ethylbenzene	<0.00200	0.100	0.0935	94	0.0970	97	71-129	4	35	mg/kg	12.06.19 21:02	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.201	101	70-135	4	35	mg/kg	12.06.19 21:02	
o-Xylene	<0.00200	0.100	0.0937	94	0.0987	99	71-133	5	35	mg/kg	12.06.19 21:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		103		70-130	%	12.06.19 21:02
4-Bromofluorobenzene	97		97		102		70-130	%	12.06.19 21:02

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3109727 Matrix: Solid Date Prep: 12.06.19
MB Sample Id: 7691894-1-BLK LCS Sample Id: 7691894-1-BKS LCSD Sample Id: 7691894-1-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	0.0962	96	0.102	102	70-130	6	35	mg/kg	12.06.19 21:02	
Toluene	<0.00200	0.100	0.0952	95	0.100	100	70-130	5	35	mg/kg	12.06.19 21:02	
Ethylbenzene	<0.00200	0.100	0.0935	94	0.0970	97	71-129	4	35	mg/kg	12.06.19 21:02	
m,p-Xylenes	<0.00400	0.200	0.193	97	0.201	101	70-135	4	35	mg/kg	12.06.19 21:02	
o-Xylene	<0.00200	0.100	0.0937	94	0.0987	99	71-133	5	35	mg/kg	12.06.19 21:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		103		70-130	%	12.06.19 21:02
4-Bromofluorobenzene	97		97		102		70-130	%	12.06.19 21:02

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

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

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

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

QC Summary 645471

LT Environmental, Inc.

MUY Wayno 18 CTB

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

Seq Number: 3109727 Matrix: Soil Date Prep: 12.06.19

Parent Sample Id: 645471-001 MS Sample Id: 645471-001 S MSD Sample Id: 645471-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.103	104	0.0992	99	70-130	4	35	mg/kg	12.06.19 21:37	
Toluene	<0.00198	0.0990	0.102	103	0.100	100	70-130	2	35	mg/kg	12.06.19 21:37	
Ethylbenzene	<0.00198	0.0990	0.0989	100	0.0990	99	71-129	0	35	mg/kg	12.06.19 21:37	
m,p-Xylenes	<0.00396	0.198	0.204	103	0.206	103	70-135	1	35	mg/kg	12.06.19 21:37	
o-Xylene	<0.00198	0.0990	0.100	101	0.102	102	71-133	2	35	mg/kg	12.06.19 21:37	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		101		70-130	%	12.06.19 21:37
4-Bromofluorobenzene	101		108		70-130	%	12.06.19 21:37

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

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 645471

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

Work Order Comments

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

Project Name:	Muy Wayno 18 CTB	Turn Around	
Project Number:	012919231	Routine:	☐
PO #:	2RP-5666	Rush:	24hrs
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	3.6	Temp Blank: (Yes) No	Wet Ice: (Yes) No
Received Intact:	(Yes) No	Thermometer ID	TNM007
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	14

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	12/6/19	1009	2'	1	X	X	X
SW01			1011	0-2'				
FS02			1024	2'				
SW02			1035	0-2'				
BH01			1047	1'				
BH01A			1053	2'				
BH02			1054	1'				
BH02A			1051	2'				
BH03			1222	1'				
BH03A			1225	2'				

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Fatima		12/6/19 16:40	2		
3			4		
5			6		

Revised Date101419 Rev. 2019.1

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
Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 645471

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

Work Order Comments

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

Project Name:	Muy Wayno 18 CTB	Turn Around	
Project Number:	012919231	Routine:	☐
PO #:	2RP-5666	Rush:	24 hrs
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temperature (°C):	See PP3	Temp Blank:	Yes No	Wet Ice: Yes No
Received Intact:	Yes No	Thermometer ID		
Cooler Custody Seals:	Yes No N/A	Correction Factor:		
Sample Custody Seals:	Yes No N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH04	S	12/6/19	1240	1'	1	X	X	X
BH04A			1243	2'				
BH05			1305	1'				
BH05A			1307	2'				

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			12/6/19 16:40	2		
3				4		
5				6		

Revised Date101419 Rev. 2019.1