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

September 19, 2019

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

**3MO9P-190919-C-1410**

**RE: Deferral Request**
**Pickett Draw Federal #001**
**Remediation Permit Number 2RP-5537**
**Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment, soil sampling, and excavation activities at the Pickett Draw Federal #001 (Site) in Unit C, Section 9, Township 25 South, Range 29 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to address impacts to soil following the release of crude oil and produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Deferral Request, describing remediation that has occurred and requesting deferral of final remediation.

## RELEASE BACKGROUND

On June 21, 2019, a flowline at the Site failed due to pressure communication from hydraulic fracturing operations at a nearby well. Approximately 5.96 barrels (bbls) of crude oil and 589.58 bbls of produced water were released onto the well pad and into the pasture area northwest of the well pad. Additionally, mist from the release impacted the pasture area northeast of the well pad. Vacuum trucks were dispatched to the Site to recover free-standing fluid; approximately 5 bbls of crude oil, and 495 bbls of produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on July 2, 2019, and was assigned RP Number 2RP-5537 (Attachment 1).

## SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 51 and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 320739103584201, located approximately 9,064 feet southeast of the Site. The water well has a depth to

groundwater of approximately 140.90 feet bgs and a total depth of 192 feet bgs. Ground surface elevation at the water well location is 3,024 feet above mean sea level (AMSL), which is approximately 76 feet higher in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an intermittent stream approximately 202 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 medium 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;
- TPH: 100 mg/kg; and
- Chloride: 600 mg/kg.

## SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On July 10 and August 19, 2019, LTE personnel were at the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. Multiple buried pits were known to exist beneath the pasture area affected by the release. A section of liner was visible west of the release extent; however, the exact size and location of the buried reserve pits is unknown. LTE personnel collected six preliminary soil samples (SS01 through SS06) within and around the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach© chloride QuanTab© test strips, respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. The estimated locations of the buried reserve pits are also depicted on Figure 2.

The 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 Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (USEPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0.

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that BTEX, TPH, and/or chloride concentrations exceeded the closure criteria. Laboratory analytical results for preliminary soil samples SS05 through SS06 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the closure criteria. Based on the laboratory analytical results and field observations, delineation and excavation of impacted soil was scheduled. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1.

On August 2 through August 19, 2019, LTE personnel returned to the Site to oversee soil assessment activities to delineate impacted soil. Potholes were advanced via a track hoe at fifteen locations within and around the release extent. Potholes PH01 through PH15 were advanced to depths ranging from of 2 feet bgs to 22 feet bgs, with the deeper potholes being advanced slowly to avoid pit material. LTE watched for evidence of liner. If liner was observed, the pothole was moved. Potholes PH12 through PH15 were advanced in the pasture area north and west of the well pad in areas not affected by the release, to document naturally occurring chloride concentrations at the Site. One delineation soil sample was collected from pothole PH01 at a depth of 2 feet bgs. Two delineation soil samples were collected from each pothole PH02 through PH15 at depths ranging from 2 feet to 22 feet bgs. Soil from the potholes 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 2. Samples were chosen from the pothole intervals with the highest field screening results and from total depth of the potholes. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The potholes soil sample locations are depicted on Figure 3.

On August 15 through August 19, 2019, LTE personnel was at the Site to oversee excavation of impacted soil as indicated by potholing, visual observations, and field screening results. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Due to the presence of the wellhead and pipelines and based on field screening results, three separate excavations were completed. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW15 were collected from the sidewalls of the excavations at depths ranging from ground surface to 7 feet bgs. Composite soil samples FS01 through FS31 were collected from the floor of the excavations at depths ranging from 1 foot bgs to 7 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. The excavation extent and soil sample locations are depicted on Figure 4. Photographic documentation was conducted during excavation activities. Photographs are included in Attachment 3.

The combined excavations measured approximately 14,450 square feet in area. A total of approximately 2,000 cubic yards of soil were removed from the excavations. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

## ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS01 through SS04 indicated that BTEX, TPH, and/or chloride concentrations exceeded the closure criteria. Based on the laboratory analytical results and field observations, delineation and excavation of impacted soil was conducted.

Laboratory analytical results for background pothole samples PH12/PH12A, PH13/PH13A, PH14/PH14A, and PH15/PH15A, collected from depths ranging from 2 feet bgs to 6 feet bgs, indicated naturally occurring chloride concentrations of 903 mg/kg to 4,330 mg/kg. Based on naturally occurring chloride at the Site, a closure criteria of 4,330 mg/kg was applied.

Laboratory analytical results for pothole delineation samples PH01, PH02/PH02A, PH03A, PH04A, PH06, PH07A, and PH08/PH08A through PH11/PH11A, collected from depths ranging from 2 feet bgs to 22 feet bgs, indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the closure criteria and/or background chloride concentrations. Laboratory analytical results for pothole delineation samples PH03, PH04, PH05/PH05A, PH06A, and PH07, collected at depths ranging from 2 feet to 16 feet bgs, indicated that TPH or chloride concentrations exceeded the closure criteria and/or background chloride concentrations. Impacted soil was excavated to the extent possible. Potholes samples PH03, PH04, PH05, and PH07, collected at 2 feet bgs, were excavated during the subsequent excavation activities.

Laboratory analytical results for excavation sidewall samples SW01 through SW04, SW06 through SW11, SW13 through SW15, and excavation floor samples FS01 through FS15, FS17 through FS19, FS22, FS23, FS25, and FS27 through FS31 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the closure criteria and/or background chloride concentrations. Laboratory analytical results for excavation sidewall samples SW05 and SW12 and excavation floor samples FS16, FS20, FS21, FS24, and FS26, indicated that TPH concentrations exceeded the closure criteria. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 4.

Further excavation of impacted soil beyond excavation sidewall samples SW05 and SW12 was limited due to the presence of the wellhead and an active pipeline. XTO safety policy restricts soil disturbing activities to a 10-foot radius of active wellheads and a 2-foot radius of any active pipelines. This XTO safety policy is established to protect workers and reduce the likelihood of compromising the foundation of active wellheads and pipelines.

Further excavation in the area of floor samples FS16, FS20, FS21, FS24, and FS26, and pothole delineation samples PH05A and PH06A was limited by the presence of buried lined reserve pits. The precise location of the buried pits is unknown and deeper excavation would risk encountering the buried pits and compromising the integrity of the pits and liners.

## DEFERRAL REQUEST

A total of approximately 2,000 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in place due to the risk of compromising buried pits and for compliance with the XTO safety policy regarding earth moving activities within 10 feet of active wellheads and 2 feet of active pipelines.

Laboratory analytical results for excavation floor samples FS16, FS20, FS21, FS24, and FS26, collected at depths of 4 feet bgs to 6 feet bgs, indicated that TPH concentrations exceeded the closure criteria at concentrations ranging from 146 mg/kg to 2,070 mg/kg. Further excavation cannot be completed due to the presence of buried lined reserve pits. Excavation would risk encountering the pits and compromising the integrity of the pits and protective liners. The impacted soil remaining in place is delineated vertically by delineation soil samples PH02A, PH03A, PH04A, PH10A and laterally by excavation sidewall samples SW01 through SW04, SW06 through SW11, and SW13 through SW15. TPH concentrations in the floor samples are below the 2,500 mg/kg closure criteria that would be applicable based on depth to groundwater. The 100 mg/kg TPH closure criteria is being applied based on the proximity of an intermittent stream/dry wash. The floor samples with TPH concentrations greater than 100 mg/kg that were left in place were collected from depths deeper than the intermittent and losing stream/dry wash and the intermittent surface water present in the wash will not be affected by impacted soil left in place at depth and buried with new caliche. Natural attenuation will occur through biodegradation of residual TPH concentrations. Based on the current and future planned use of the area, the presence of buried pits, depth to groundwater at the Site, and closure of the potential pathway for residual TPH concentrations to impact surface water (through removal of impacted shallow soil), natural attenuation of residual TPH in subsurface soil appears to be an effective remedial approach to protecting human health and the environment.

Laboratory analytical results for excavation sidewall samples SW05 and SW12 collected from the final excavation extents indicated that soil with TPH concentrations exceeding the closure criteria were left in place within 10 feet of an active wellhead and within 2 feet of an active pipeline. The impacted soil remaining in place in these areas is delineated vertically and laterally by excavation soil samples SW04, SW06, SW10, SW13, SW14, FS22, FS23, and FS31 collected from the sidewalls and floor of the final excavation extents, and delineation soil samples PH07A, PH08/PH08A, PH09/PH09A, and PH11/PH11A. An estimated 200 cubic yards of impacted soil remains in place surrounding sidewall samples SW05 and SW12, assuming a maximum 5-foot depth based on

samples FS22, FS23, PH07A, PH08A, PH09A, and PH11A collected at depths of 4 or 5 feet bgs that were compliant with the TPH closure criteria.

XTO requests to backfill the existing excavations and complete remediation during any future major construction/alteration or final plugging and abandonment, whichever occurs first. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. No saturated soil remains in place. Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests deferral of final remediation for RP Number 2RP-5537. Upon approval of this deferral request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated NMOCD Form C-141 is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

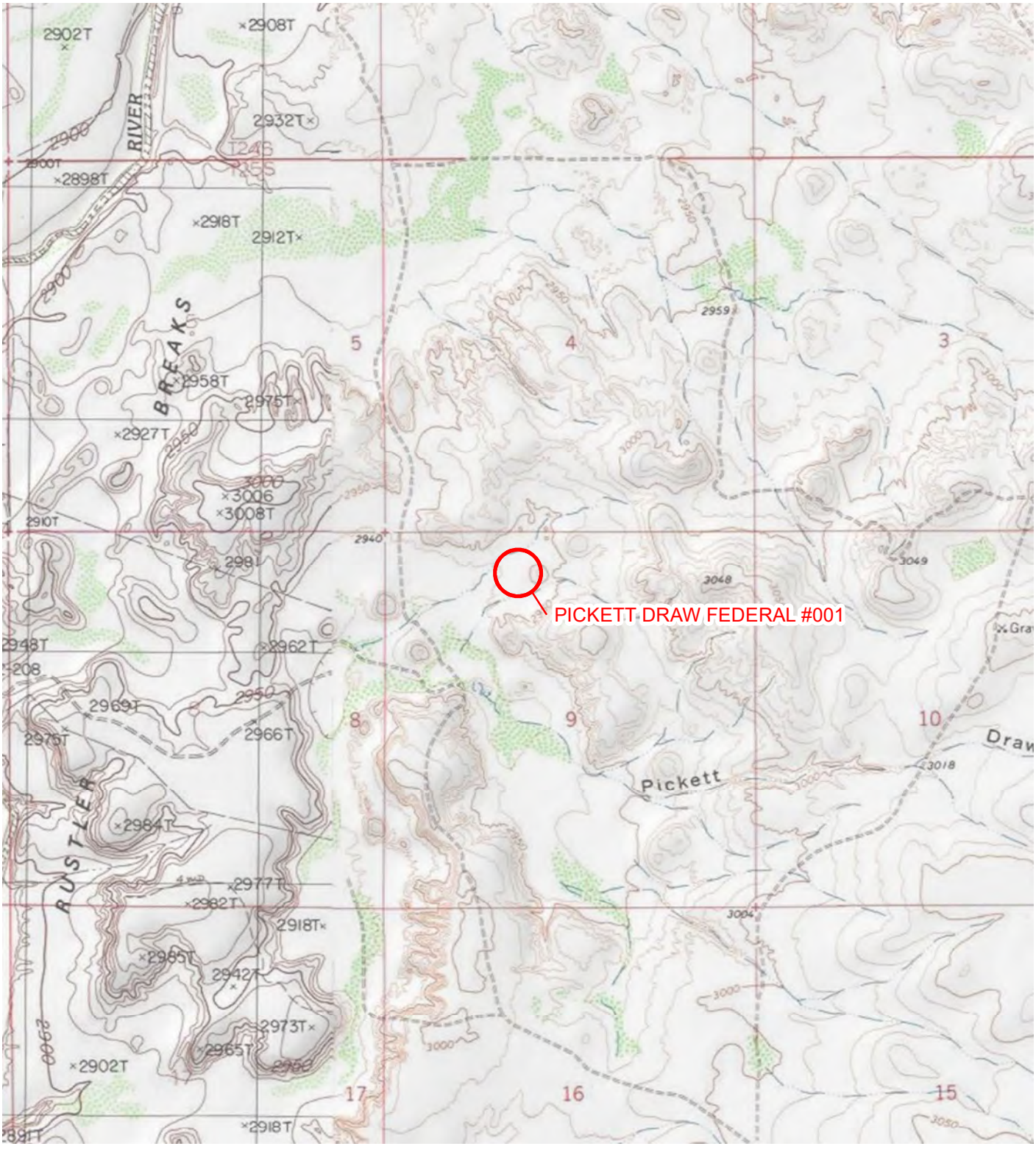
Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

| | |
|---|---|
| Figure 1 | Site Location Map |
| Figure 2 | Preliminary Soil Sample Locations |
| Figure 3 | Delineation Soil Sample Locations |
| Figure 4 | Excavation Soil Sample Locations |
| Table 1 | Soil Analytical Results |
| Attachment 1 | Initial/Final NMOCD Form C-141 (2RP-5537) |
| Attachment 2 | Lithologic / Soil Sample Logs |
| Attachment 3 | Photographic Log |
| Attachment 4 | Laboratory Analytical Reports |




**LEGEND**

SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000

Feet

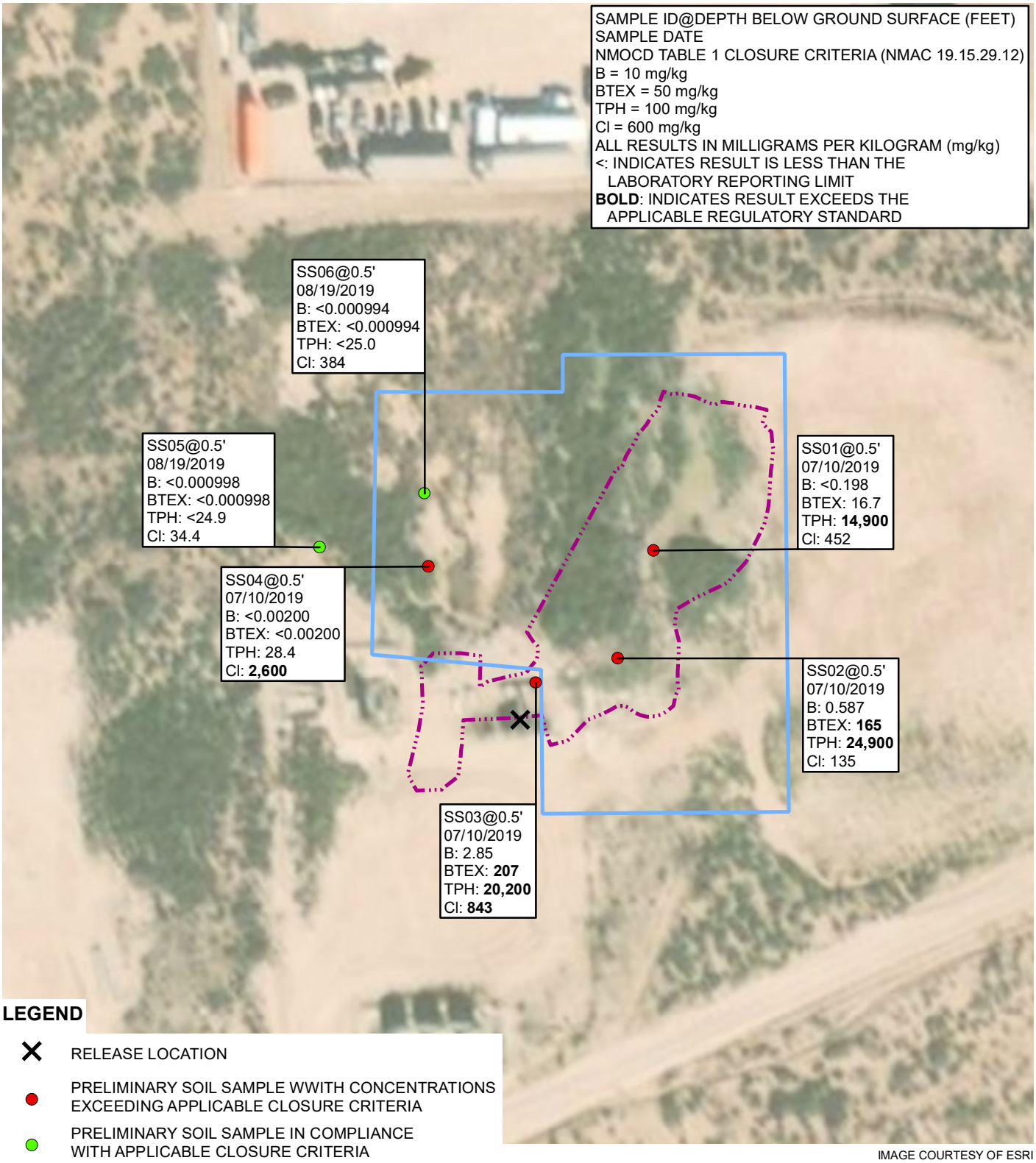
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBERS 2RP-5537

FIGURE 1
SITE LOCATION MAP
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

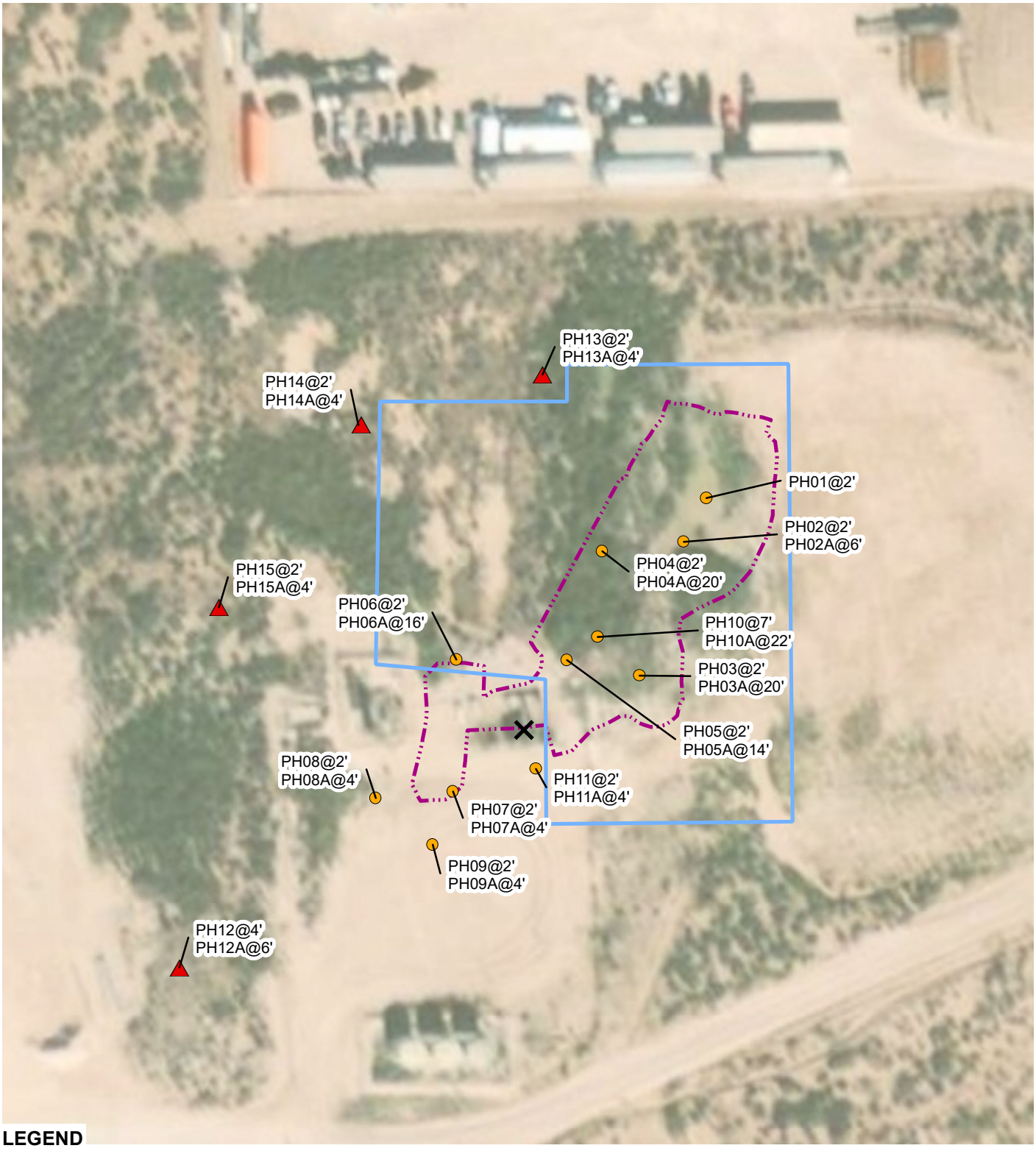
P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG01_SL_5537.mxd




B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG02_PRELIMINARY_5537_1.mxd




**LEGEND**

- RELEASE LOCATION
- DELINEATION SOIL SAMPLE
- BACKGROUND SOIL SAMPLE
- RELEASE EXTENT
- APPROXIMATE LOCATION OF MULTIPLE FORMER BURIED PITS

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

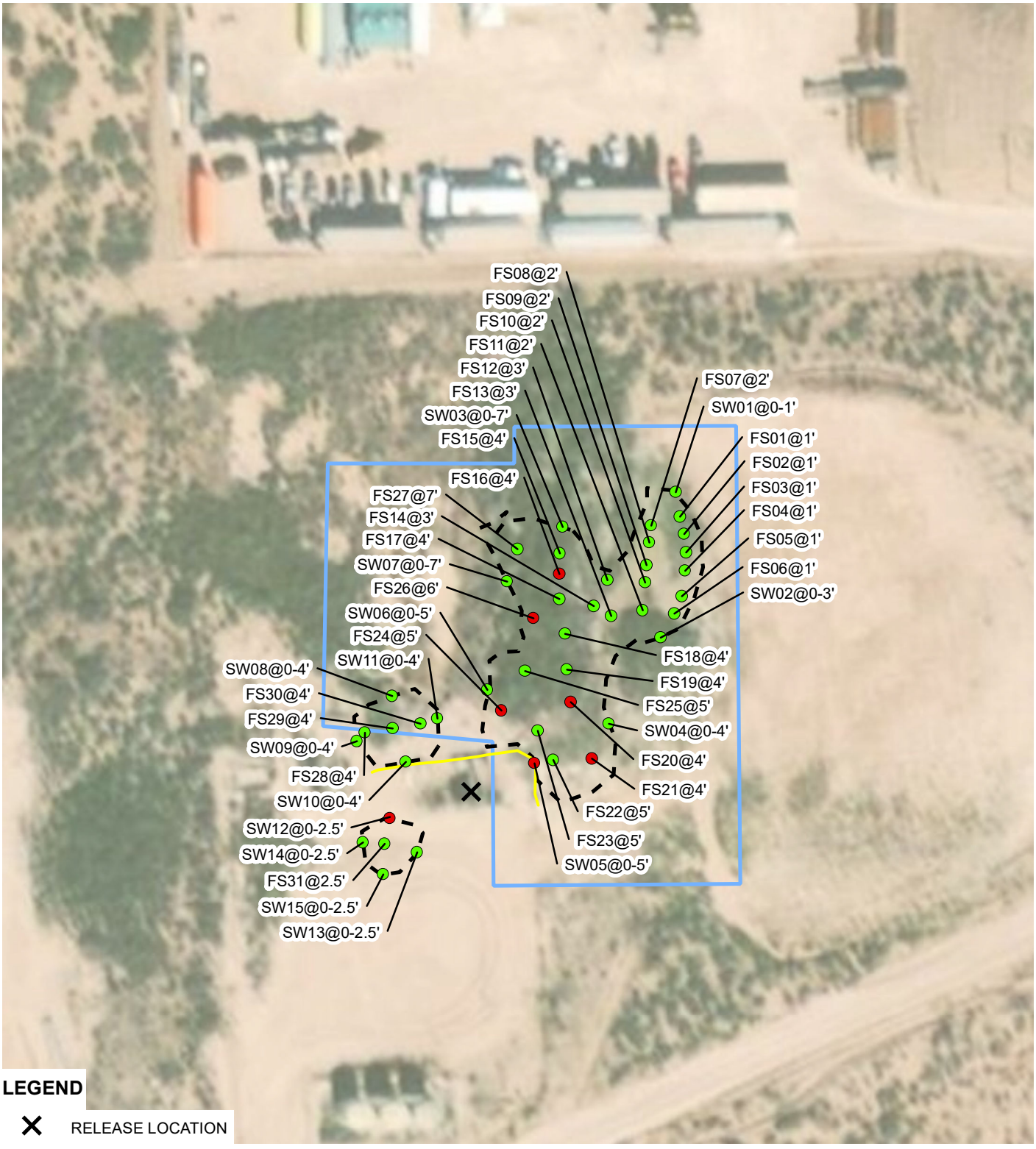
IMAGE COURTESY OF ESRI

0 80 160
Feet

N

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG03_DELINEATION_5537_1.mxd




**LEGEND**

- RELEASE LOCATION
- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- GAS LINE
- EXCAVATION EXTENT
- APPROXIMATE LOCATION OF MULTIPLE FORMER BURIED PITS

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: REMEDIATION PERMIT NUMBER 2RP-5537

IMAGE COURTESY OF ESRI

0 80 160
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
PICKETT DRAW FEDERAL #001
UNIT C SEC 9 T25S R29E
EDDY COUNTY, NEW MEXICO
**XTO ENERGY, INC.**

P:\XTO Energy\GIS\MXD\012919150_PICKETT DRAW FEDERAL #001\012919150_FIG04_EXCAVATION_5537_1.mxd

**TABLE 1**
**SOIL ANALYTICAL RESULTS**

**PICKETT DRAW FEDERAL #001**
**REMEDIATION PERMIT NUMBER 2RP-5537**
**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SS01 | 0.5 | 07/10/2019 | <0.198 | 1.50 | 1.39 | 13.8 | 16.7 | 1,420 | 12,800 | 640 | 14,200 | **14,900** | 452 |
| SS02 | 0.5 | 07/10/2019 | 0.587 | 18.8 | 15.1 | 131 | **165** | 4,120 | 20,000 | 823 | 24,100 | **24,900** | 135 |
| SS03 | 0.5 | 07/10/2019 | 2.85 | 50.2 | 16.7 | 137 | **207** | 5,590 | 14,000 | 654 | 19,600 | **20,200** | 843 |
| SS04 | 0.5 | 07/10/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | 28.4 | <15.0 | 28.4 | 28.4 | 2,600 |
| SS05 | 0.5 | 08/19/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 34.4 |
| SS06 | 0.5 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 384 |
| PH01 | 2 | 08/02/2019 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 875 |
| PH02 | 2 | 08/02/2019 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | 28 | <15.0 | 28 | 28 | 140 |
| PH02A | 6 | 08/02/2019 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <0.00201 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 15 |
| PH03 | 2 | 08/02/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | 144 | 19.3 | 144 | **163** | 1,550 |
| PH03A | 20 | 08/02/2019 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <15.0 | 42 | <15.0 | 42 | 42 | 16.4 |
| PH04 | 2 | 08/02/2019 | 0.00626 | 0.228 | 0.28 | 4.05 | 4.56 | 526 | 2,630 | 283 | 3,160 | **3,440** | 511 |
| PH04A | 20 | 08/05/2019 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 1,750 |
| PH05 | 2 | 08/05/2019 | 0.0863 | 7.1 | 5.01 | 15.4 | 27.6 | 2,150 | 4,720 | 338 | 6,870 | **7,210** | 123 |
| PH05A | 14 | 08/05/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | 16.7 | 340 | 39.5 | 357 | **396** | 813 |
| PH06 | 2 | 08/05/2019 | <0.00199 | 0.00372 | 0.00447 | 0.0154 | 0.0236 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 420 |
| PH06A | 16 | 08/05/2019 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | **5,430** |
| PH07 | 2 | 08/05/2019 | <0.00200 | 0.00315 | 0.00266 | 0.0124 | 0.0182 | <15.0 | 323 | 53.6 | 323 | **377** | 842 |
| PH07A | 4 | 08/05/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 508 |
| PH08 | 2 | 08/05/2019 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <0.00199 | <14.9 | <14.9 | <14.9 | <14.9 | <14.9 | 24.4 |
| PH08A | 4 | 08/05/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 56.7 |
| PH09 | 2 | 08/05/2019 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 145 |
| PH09A | 4 | 08/05/2019 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <0.00198 | <15.0 | <15.0 | <15.0 | <15.0 | <15.0 | 311 |
| PH10 | 7 | 08/15/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 1,380 |
| PH10A | 22 | 08/15/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 4,240 |
| PH11 | 2 | 08/19/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 355 |

**TABLE 1**
**SOIL ANALYTICAL RESULTS**

**PICKETT DRAW FEDERAL #001**
**REMEDIATION PERMIT NUMBER 2RP-5537**
**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PH11A | 4 | 08/19/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 265 |
| PH12 | 4 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 1,620 |
| PH12A | 6 | 08/19/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 2,000 |
| PH13 | 2 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,390 |
| PH13A | 4 | 08/19/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 903 |
| PH14 | 2 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 3,340 |
| PH14A | 4 | 08/19/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 4,330 |
| PH15 | 2 | 08/19/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,250 |
| PH15A | 4 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,860 |
| FS01 | 1 | 08/15/2019 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <25.2 | <25.2 | <25.2 | <25.2 | <25.2 | 969 |
| FS02 | 1 | 08/15/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 142 |
| FS03 | 1 | 08/15/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 256 |
| FS04 | 1 | 08/15/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 176 |
| FS05 | 1 | 08/15/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | 29.2 | <24.9 | 29.2 | 29.2 | 196 |
| FS06 | 1 | 08/15/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 51.8 |
| FS07 | 2 | 08/15/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 195 |
| FS08 | 2 | 08/15/2019 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <25.1 | 83.7 | <25.1 | 83.7 | 83.7 | 189 |
| FS09 | 2 | 08/15/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <25.1 | 27.7 | <25.1 | 27.7 | 27.7 | 237 |
| FS10 | 2 | 08/15/2019 | <0.00101 | <0.00101 | 0.00224 | <0.00101 | 0.00224 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 74.0 |
| FS11 | 2 | 08/15/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 350 |
| FS12 | 3 | 08/15/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 274 |
| FS13 | 3 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 319 |
| FS14 | 3 | 08/15/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 38.2 |
| FS15 | 4 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | 152 | <25.1 | 152 | 152 | 183 |
| FS16 | 4 | 08/15/2019 | <0.000994 | <0.000994 | 0.00243 | 0.0359 | 0.0383 | <25.0 | 586 | <25.0 | 586 | **586** | 161 |

**TABLE 1**
**SOIL ANALYTICAL RESULTS**

**PICKETT DRAW FEDERAL #001**
**REMEDIATION PERMIT NUMBER 2RP-5537**
**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FS17 | 4 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <24.9 | 57.6 | <24.9 | 57.6 | 57.6 | 187 |
| FS18 | 4 | 08/15/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <24.9 | 59.0 | <24.9 | 59.0 | 59.0 | 633 |
| FS19 | 4 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | 42.2 | <25.1 | 42.2 | 42.2 | 1,150 |
| FS20 | 4 | 08/15/2019 | <0.00100 | <0.00100 | 0.00148 | 0.0183 | 0.0198 | <25.1 | 190 | <25.1 | 190 | **190** | 1,410 |
| FS21 | 4 | 08/15/2019 | <0.000996 | <0.000996 | 0.00117 | 0.0111 | 0.0123 | 901 | 1,170 | <25.0 | 2,070 | **2,070** | 767 |
| FS22 | 5 | 08/19/2019 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 3,820 |
| FS23 | 5 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,450 |
| FS24 | 5 | 08/19/2019 | <0.00100 | <0.00100 | 0.00341 | 0.0443 | 0.0477 | <25.0 | 319 | <25.0 | 319 | **319** | 2,240 |
| FS25 | 5 | 08/19/2019 | <0.000992 | <0.000992 | <0.000992 | <0.000992 | <0.000992 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,050 |
| FS26 | 6 | 08/19/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <24.9 | 146 | <24.9 | 146 | **146** | 127 |
| FS27 | 7 | 08/19/2019 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <0.000996 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 66.5 |
| FS28 | 4 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 894 |
| FS29 | 4 | 08/19/2019 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 812 |
| FS30 | 4 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 854 |
| FS31 | 2.5 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 646 |
| SW01 | 0 - 1 | 08/15/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <25.1 | 42.3 | <25.1 | 42.3 | 42.3 | 723 |
| SW02 | 0 - 3 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 512 |
| SW03 | 0 - 7 | 08/15/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.0 | 50.1 | <25.0 | 50.1 | 50.1 | 504 |
| SW04 | 0 - 4 | 08/15/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 43.0 |
| SW05 | 0 - 5 | 08/19/2019 | <0.500 | 2.08 | 2.60 | 28.4 | 33.0 | 615 | 3,810 | <25.0 | 4,430 | **4,430** | 188 |
| SW06 | 0 - 5 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 56.7 |
| SW07 | 0 - 7 | 08/19/2019 | <0.000998 | 0.00107 | <0.000998 | <0.000998 | 0.00107 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 49.8 |
| SW08 | 0 - 4 | 08/19/2019 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <0.00101 | <24.9 | <24.9 | <24.9 | <24.9 | <24.9 | 724 |
| SW09 | 0 - 4 | 08/19/2019 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <0.000994 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 42.9 |
| SW10 | 0 - 4 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.0 | 86.2 | <25.0 | 86.2 | 86.2 | 801 |

**TABLE 1**
**SOIL ANALYTICAL RESULTS**

**PICKETT DRAW FEDERAL #001**
**REMEDIATION PERMIT NUMBER 2RP-5537**
**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW11 | 0 - 4 | 08/19/2019 | <0.000992 | <0.000992 | <0.000992 | <0.000992 | <0.000992 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 47.0 |
| SW12 | 0 - 2.5 | 08/19/2019 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <0.000990 | <24.9 | 140 | <24.9 | 140 | **140** | 1,760 |
| SW13 | 0 - 2.5 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 684 |
| SW14 | 0 - 2.5 | 08/19/2019 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | <25.0 | <25.0 | <25.0 | <25.0 | <25.0 | 1,450 |
| SW15 | 0 - 2.5 | 08/19/2019 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <0.000998 | <25.1 | <25.1 | <25.1 | <25.1 | <25.1 | 238 |
| **NMOCD Table 1 Closure Criteria** | | | **10** | NE | NE | NE | **50** | NE | NE | NE | NE | **100** | 600 |
| | | | | | | | | | | **Highest Documented Naturally Occurring Background Concentration** | | | **4,330** |

**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
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
TPH - total petroleum hydrocarbons
NE - not established
**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

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 | NAB1919955454 |
| District RP | 2RP-5537 |
| Facility ID | |
| Application ID | pAB1919955186 |

# Release Notification

## Responsible Party

| | |
|---|---|
| Responsible Party XTO Energy | OGRID 5380 |
| Contact Name Kyle Littrell | Contact Telephone 432-221-7331 |
| Contact email Kyle_Littrell@xtoenergy.com | Incident # *(assigned by OCD)* NAB1919955454 |
| Contact mailing address 522 W. Mermod, Carlsbad, NM 88220 | |

## Location of Release Source

Latitude 32.150097° Longitude -103.991664°
*(NAD 83 in decimal degrees to 5 decimal places)*

| | |
|---|---|
| Site Name Pickett Draw Federal #001 | Site Type Production Well Facility |
| Date Release Discovered 6/21/2019 | API# *(if applicable)* 30-015-25767 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| C | 9 | 25S | 29E | Eddy |

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

## 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) 5.96 | Volume Recovered (bbls) 5 |
| ☒ Produced Water | Volume Released (bbls) 589.58 | Volume Recovered (bbls) 495 |
| | Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l? | ☐ Yes ☐ No |
| ☐ Condensate | Volume Released (bbls) | Volume Recovered (bbls) |
| ☐ Natural Gas | Volume Released (Mcf) | Volume Recovered (Mcf) |
| ☐ Other (describe) | Volume/Weight Released (provide units) | Volume/Weight Recovered (provide units) |

Cause of Release

Flowline failed due to pressure communication with the Pickett Draw Federal #1 from hydraulic frac operations for the Corral Canyon Federal Com 6H well. Fluids were released to the well pad and pasture to the NW (approx 60 ft) and misting to the NE (approx 180 ft). Vacuum trucks recovered free fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | NAB1919955454 |
| District RP | 2RP-5537 |
| Facility ID | |
| Application ID | pAB1919955186 |

| | |
|---|---|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br>☒ Yes ☐ No | If YES, for what reason(s) does the responsible party consider this a major release?<br>An unauthorized release of a volume of 25 barrels or more |

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Notice provided by Bryan Foust to Mike Bratcher, Rob Hamlet, Victoria Venegas, and Jim Griswold (NMOCD), and Jim Amos and Deborah McKinney (BLM), on 6/22/2019 by email

## 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: Amy C. Ruth
Title: SH&E Coordinator
Signature:
Date: 7/2/2019
email: Amy_Ruth@xtoenergy.com
Telephone: 575-689-3380

**OCD Only**

Received by: Amalia Bustamante
Date: 7/18/2019

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | 2RP-5537 |
| Application ID | |

# Site Assessment/Characterization

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

| | |
|---|---|
| What is the shallowest depth to groundwater beneath the area affected by the release? | 51-100 (ft bgs) |
| Did this release impact groundwater or surface water? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse? | ☒ Yes ☐ No |
| Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring? | ☐ Yes ☒ No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field? | ☐ Yes ☒ No |
| Are the lateral extents of the release within 300 feet of a wetland? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying a subsurface mine? | ☐ Yes ☒ No |
| Are the lateral extents of the release overlying an unstable area such as karst geology? | ☐ Yes ☒ No |
| Are the lateral extents of the release within a 100-year floodplain? | ☐ Yes ☒ No |
| Did the release impact areas **not** on an exploration, development, production, or storage site? | ☒ Yes ☐ No |

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

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

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

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

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | 2RP-5537 |
| Application ID | |

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date:

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

**OCD Only**

Received by: Date:

State of New Mexico
Oil Conservation Division

| | |
|---|---|
| Incident ID | |
| District RP | |
| Facility ID | 2RP-5537 |
| Application ID | |

# Remediation Plan

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

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

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

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

☒ Extents of contamination must be fully delineated.

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: _____

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

**OCD Only**

Received by: _____ Date: _____

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

Signature: _____ Date: _____

# ATTACHMENT 2: LITHOLOGIC SOIL SAMPLE LOGS

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

| Identifier: | Date: |
|---|---|
| PH01 | 08/02/19 |
| **Project Name:** | **RP Number:** |
| Pickett Draw | 2RP-5537 |
| **Logged By:** L. Lambert | **Method:** trackhoe |
| **Field Screening:** PID, chloride | **Hole Diameter:** 2' |
| **Lat/Long:** | **Total Depth:** 4' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| damp/moist | | 29.6 | N | | 0 | | | |
| | | | | | 1' | | | SAND, sandy loam, light brown |
| | 648 (4.0) | 8.5 | N | PH01 | 2' | | SW-SM | |
| | | | | | 3 | | | |
| | 488 (3.4) | 5.9 | N | PH01A | 4 | | | |
| | | | | | 5 | | | deepest depth |
| | | | | | 6 | | | |
| | | | | | 7 | | | |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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

| Identifier: | Date: |
|---|---|
| PH-2 | 08/02/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw fed 1 | 2RP 5537 |
| **Logged By:** L. Lambert | **Method:** trackhoe |
| **Hole Diameter:** 2' | **Total Depth:** 6' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long:

Field Screening: PID, chloride

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry/moist | 648 (4.0) | 3.8 | N | | 0–1 | | | ~~Sand~~ w/silt, settle quickly, light brown/tan |
| | 128 (1.9) | 12.7 | N | PH-2 | 2–3 | | SW-SM | dry, N odor |
| | <128 (1.2) | 13.3 | N | | 4–5 | | | |
| | <128 (<1.0) | 3.8 | N | PH-2A | 6 | | | deepest depth |
| | | | | | 7–12 | | | |

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

| Identifier: PH03 | Date: 08/02/2019 |
|---|---|
| Project Name: Pickett Draw Fed 1 | RP Number: 2RP-5537 |
| Logged By: L. Lambert | Method: trackhoe |
| Hole Diameter: 2' | Total Depth: 20' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long:

Field Screening: PID, chloride strips

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | ~~1144~~ | 715.2 | Y | 1 | 0–1 | | SW-SM | SAND, sandy loam, silt, dry, odor |
| damp | 1144 (5.4) | >5000 | Y | PH03 | 1–2 | | | |
| | | | | | 2–3 | | CALICHE | CALICHE, dry, rocky, odor |
| dry | 1420 (6.0) | >5000 | Y | | 3–4 | | | |
| | | | | | 4–5 | | | |
| dry | 768 (4.4) | 715.2 | N | | 5–6 | | | |
| | | | | | 6–7 | | | |
| dry | 708 (4.2) | >5000 | N | | 7–8 | | | |
| | | | | | 8–9 | | | |
| dry | 884 (5.0) | 143.2 | N | | 9–10 | | | |
| | | | | | 10–11 | | | |
| dry | 980 | >5000 | N | | 11–12 | | | |

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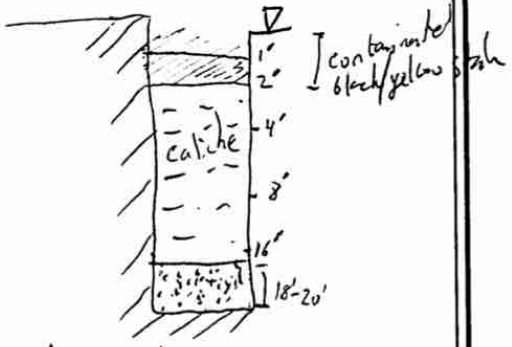
| | |
|---|---|
| Identifier: PH04 | Date: 08/02/2019 (08/08/2019) |
| Project Name: Pickett Draw Fed 1 | RP Number: 2RP-5537 |
| Logged By: L. Lambreth | Method: trackhoe |
| Hole Diameter: 2' | Total Depth: 20' |
| Lat/Long: | Field Screening: PID, chloride strips |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | |
| | | | | | 1 | | | |
| dap | 352 (2.8) | >15000 | Y | PH04 | 2 | | CALICHE | CALICHE, dap yellow/stain, odor |
| | | | | | 3 | | | |
| dap | <128 (<1) | >15000 | N | | 4 | | | CALICHE, dap, white/tan odor |
| | | | | | 5 | | | |
| dap | <128 (<1) | >15000 | N | | 6 | | | |
| | | | | | 7 | | | |
| dap | <128 (<1) | >15000 | N | | 8 | | | CALICHE, white, damp, odor |
| | | | | | 9 | | | |
| | <128 (<1) | >15000 | N | | 10 | | | |
| | | | | | 11 | | | |
| | <128 (<1) | >15000 | N | | 12 | | | |



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| Identifier: | Date: |
|---|---|
| PH04 cntd | 08/05/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #001 | 2RP 5537 |
| **Logged By:** L. Lambach | **Method:** trackhoe |
| **Hole Diameter:** 2' | **Total Depth:** 20' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long:

Field Screening: PID, chlorides

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | <128 | >15000 | N | | 0 – 1 | | | CALICHE, rocky ½", odor while dry |
| dry | <128 | >15000 | N | | 2 – 3 | | SP | SAND, coarse <10% fines, pink tan, dry |
| dry | <128 | >15000 | N | PH04A | 4 – 5 | | | ↓ |
| | | | | | 6 – 12 | | | deepest trackhoe depth |

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| | |
|---|---|
| Identifier: PH05 | Date: 08/05/2019 |
| Project Name: Pickett Draw Fed 1 | RP Number: 2RP 5537 |
| Logged By: L. Lumbard | Method: trackhoe |
| Hole Diameter: 2' | Total Depth: 14' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long:

Field Screening: PID, chloride strips

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | |
| | | | | | 1 | | SWSM | topsoil SAND |
| | <128 (<1) | >15000 | N | PH05 | 2 | | | ~~caliche~~ SAND, brown, odor ~ visible staining |
| | | | | | 3 | | | ~70ppm offgassing from around pothole<br>odor similar to spraypaint |
| | 180 (1.8) | >15000 | N | | 4 | | | |
| | | | | | 5 | | CALICHE | 4.5' caliche, broken/sharded light tan/off white, odor |
| | 276 ~~(7.0)~~ (2.7) | >15000 ~~22.1~~ | N | | 6 | | | |
| | | | | | 7 | | | |
| | — | >15000 | N | | 8 | | | |
| | | | | | 9 | | | |
| | ~~(9.0)~~ | 7500 ~~11.7~~ | N | | 10 | | | |
| | | | | | 11 | | | |
| | 908 (4.8) | >15000 | N | | 12 | | | |

>15000 PH05A 14' trackhoe refusal

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| Identifier: | Date: |
|---|---|
| PH6 | 08/05/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP - 5537 |
| **Logged By:** L. Lawrbach | **Method:** backhoe |
| **Lat/Long:** | **Field Screening:** PID, chlorides |
| **Hole Diameter:** 2' | **Total Depth:** 20' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| damp | 396 (3.0) | 67.2 | N | PH6 | 0 | | | |
| | | | | | 1 | | | |
| | | | | | 2 | | SW-SM | Nodor SAND, silty vegetation still alive Nonplastic, brown |
| | | | | | 3 | | | |
| damp | 648 (4.0) | 59.3 | N | | 4 | | | |
| moist | | | | | 5 | | | caliche, damp, cobbly nodor light tan/yellow |
| | 2016 (7.0) | 22.1 | N | | 6 | | CALICHE | |
| | | | | | 7 | | | |
| damp | >2492 (8.5) | | N | | 8 | | | |
| | | | | | 9 | | | |
| damp | >2492 (9.0) | 44.7 | N | | 10 | | | |
| | | | | | 11 | | | |
| dry | >2492 (9.5) | 24.1 | N | | 12 | | | sand, slightly damp |

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| Identifier: | Date: |
|---|---|
| PH06 cntd | 08/05/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP-5537 |
| **Logged By:** L. Laumbach | **Method:** trackhoe |
| **Lat/Long:** | **Field Screening:** PID, chlorides |
| **Hole Diameter:** 2' | **Total Depth:** 20' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | 7 2492 (9.2) | 21.4 | | PH06A | 20' | | | CALICHE, shards - rocky<br>deepest depth |

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| Identifier: | Date: |
|---|---|
| PH-7 | 08/05/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP 5537 |
| **Logged By:** L. Laumbach | **Method:** trackhoe |
| **Lat/Long:** | **Field Screening:** PID, chlorides |
| **Hole Diameter:** 2' | **Total Depth:** 6' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | 836 (9.6) | 1622 | | PH-7 | 2' | | Surface | SAND, silty, >30% fines, no odor, brown |
| dry | 312 (2.6) | 12.2 | | | 4 | | | |
| dry | 396 (3.0) | 9.4 | | PH-7A | 6 | | | CALICHE, nodular, white |
| | | | | | 7 | | | deepest depth |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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| Identifier: PH08 | Date: 08/05/2019 |
|---|---|
| Project Name: Pickett Drawfed #1 | RP Number: 2RP 5537 |
| Logged By: L. Laumbach | Method: trackhoe |
| Lat/Long: | Field Screening: PID, chlorides |
| Hole Diameter: 2' | Total Depth: 6' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | CALICHE - Pad |
| dry | <128 | 10.2 | N | PH08 | 2 | | SW-SM | SAND, silty, No odor, brown |
| dry | <128 | 13.0 | N | | 4 | | | CALICHE, white, off white, No odor |
| dry | <128 | 14.2 | N | PH08A | 6 | | | deepest depth |
| | | | | | 7 | | | |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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| Identifier: | Date: |
|---|---|
| PH09 | 08/05/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #001 | 2RP 5537 |
| **Logged By:** L. Laumbach | **Method:** trackhoe |
| **Lat/Long:** | **Field Screening:** PID, chlorides |
| **Hole Diameter:** 2' | **Total Depth:** 4' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | <128 | 30.1 | N | PH09 | 2' | | Slv-Sm | SAND, silty, no odor brown |
| | | | | | 3 | | | ↓ |
| dry | 164 | 16.9 | N | PH09A | 4' | | | CALICHE, white, no odor |
| | | | | | 5 | | | ↓ |
| | | | | | 6 | | | deepest depth |
| | | | | | 7 | | | |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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| | |
|---|---|
| Identifier: PH10 | Date: 08/15/2019 |
| Project Name: Pickett Draw Fed #1 | RP Number: 2RP 5537 |
| Logged By: L. Lambach | Method: trackhe |
| Hole Diameter: 2' | Total Depth: 4' bgs |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long: 32.150207, -103.991581
Field Screening: PID
Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | |
| | | | | | 1 | | | |
| | | | | | 2 | | | |
| | | | | | 3 | | | Open excavation |
| | | | | | 4 | | | |
| | | | | | 5 | | | |
| | | | | | 6 | | | |
| dry | (3.4) | 73.2 | | PH10 | 7 | | | CALICHE, odor |
| | | | | | 8 | | | |
| dry | | 58.5 | | | 9 | | +SP | CALICHE, sand mix, odor, white/tan + light brown |
| | | | | | 10 | | | |
| dry | (4.6) | 14.9 | | | 11 | | | CALICHE No odor, white/tan |
| | | | | | 12 | | | |

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| Identifier: | Date: |
|---|---|
| PH10 cont'd | 08/15/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP 5537 |
| **Logged By:** L. Lambuth | **Method:** trackhoe |
| **Lat/Long:** | **Field Screening:** PID |
| **Hole Diameter:** | **Total Depth:** |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | (6.4) | 23.4 | | | | 15' | | ← CALICHE, white, v dor hard to dig through |
| dry | (6.4) | 17.7 | | | | 19' | | |
| dry | (6.4) | 9.2 | | PH10A | | 22' | | |
| | | | | | | | | Trackhoe refusal |

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| Identifier: | Date: |
|---|---|
| PH11 | 08/19/2015 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed 1 | 2RP-5537 |
| **Logged By:** L. Lambert | **Method:** backhoe |
| **Hole Diameter:** 2' | **Total Depth:** 4' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long: 32.1500610°, -103.4916796 | Field Screening: PID, chlorides

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) (PID) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | CALICHE, non native |
| | | | | | 1 | | | |
| dry | | 7 | | | 2' | | | SAND, silt, no odor |
| | | | | | 3 | | | |
| dry | | 23.1 | | | 4' | | | SAND, silt |
| | | | | | 5 | | | deepest depth |
| | | | | | 6 | | | |
| | | | | | 7 | | | |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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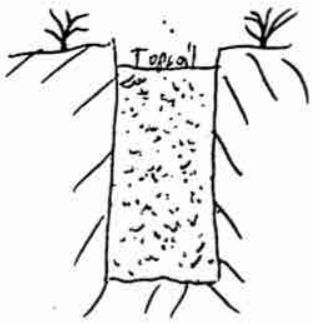
| Identifier: | Date: |
|---|---|
| PH12 | 08/19/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed 1 | 2RP 5537 |
| **Logged By:** L. Laumbach | **Method:** trackhoe |
| **Hole Diameter:** 2' | **Total Depth:** 8' |

## LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.1497486, -103.9923859
Field Screening: PID, chlorides
Comments: @ background sample @

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | | | 0 | | | Topsoil, Brown |
| | | | | | 1 | | | |
| Dry | | 0.0 | ✓ | | 2' | | SP | SAND, reddish yellow, No odor/No stain, poorly graded, dry, ~1" rocks, interspersed |
| | | | | | 3 | | | |
| Dry | 1420 | 23.1 ~~0.0~~ | ✓ | PH12 | 4' | | | SAND |
| | | | | | 5 | | | |
| Dry | | 0.0 | ✓ | | 6' | | | SAND |
| | | | | | 7 | | | |
| Dry | 1636 | 0.0 | ✓ | PH12A | 8' | | | SAND |
| | | | | | 9 | | | Deepest depth |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |



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| Identifier: | Date: |
|---|---|
| PH13 | 08/19/2021 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP 5537 |
| **Logged By:** L. Lawrence | **Method:** backhoe |
| **Lat/Long:** 32.1506703, -103.9916879 | **Field Screening:** PID |
| **Hole Diameter:** 2' | **Total Depth:** 4' |

## LITHOLOGIC / SOIL SAMPLING LOG

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | / | 3.7 | / | PH13 | 0–4 | | SM | SAND, silty, brown, no odor |
| dry | / | 3.4 | / | PH13A | | | SM | |
| | | | | | 5–12 | | | deepest depth |

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| Identifier: | Date: |
|---|---|
| PH14 | 08/19/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP 5537 |
| **Logged By:** L. Lambuth | **Method:** backhoe |
| **Hole Diameter:** 2' | **Total Depth:** 4' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Lat/Long: 32.15049295, -103.99178549
Field Screening: PID
Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | / | 0.9 | / | PH14 | 2 | | SM | SAND, silty, brown, moist |
| dry | / | 0.0 | / | PH14A | 4 | | SM | |
| | | | | | 5 | | | deepest depth |
| | | | | | 6 | | | |
| | | | | | 7 | | | |
| | | | | | 8 | | | |
| | | | | | 9 | | | |
| | | | | | 10 | | | |
| | | | | | 11 | | | |
| | | | | | 12 | | | |

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| Identifier: | Date: |
|---|---|
| PH1S | 08/19/2019 |
| **Project Name:** | **RP Number:** |
| Pickett Draw Fed #1 | 2RP-5537 |
| **Logged By:** L. Lamkin | **Method:** trackhoe |
| **Lat/Long:** 32.150314, -103.9922586 | **Field Screening:** PID |
| **Hole Diameter:** 2' | **Total Depth:** 4' |

**LITHOLOGIC / SOIL SAMPLING LOG**

Comments:

| Moisture Content | Chloride (ppm) | Vapor (ppm) | Staining | Sample # | Depth (ft. bgs.) | Sample Depth | Soil/Rock Type | Lithology/Remarks |
|---|---|---|---|---|---|---|---|---|
| dry | ~ | 0.0 | N | PH1S | (2) | | SM | SAND, silty, brown, Nodor |
| dry | ~ | 0.0 | N | PH1SA | (4) | | SM | |
| | | | | | | | | deepest depth |

0 1 3 5 6 7 8 9 10 11 12

**North facing view of the excavation northeast of the well pad.**

| | | |
|---|---|---|
| Project: 012919150 | XTO Energy, Inc.<br>Pickett Draw Federal #001 | LTE Advancing Opportunity |
| August 22, 2019 | Photographic Log | |

**North facing view of the western excavation.**

| | | |
|---|---|---|
| Project: 012919150 | XTO Energy, Inc.<br>Pickett Draw Federal #001 | LTE Advancing Opportunity |
| August 22, 2019 | Photographic Log | |

**North facing view of the excavation on the well pad.**

| | | |
|---|---|---|
| Project: 012919150 | XTO Energy, Inc.<br>Pickett Draw Federal #001 | LTE Advancing Opportunity |
| August 22, 2019 | Photographic Log | |

# ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

# Analytical Report 630592

## for

## LT Environmental, Inc.

**Project Manager: Dan Moir**

**Pickett Draw Fed #001**

**16-JUL-19**

Collected By: Client


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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

16-JUL-19

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

Reference: XENCO Report No(s): **630592**
**Pickett Draw Fed #001**
Project Address: Delaware Basin

**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) 630592. 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. 630592 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

# Sample Cross Reference 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| SS01 | S | 07-10-19 00:00 | 0.5 ft | 630592-001 |
| SS02 | S | 07-10-19 00:00 | 0.5 ft | 630592-002 |
| SS03 | S | 07-10-19 00:00 | 0.5 ft | 630592-003 |
| SS04 | S | 07-10-19 00:00 | 0.5 ft | 630592-004 |

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3095299 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 630592-001,630592-003,630592-002.

Batch: LBA-3095416 Chloride by EPA 300
Lab Sample ID 630592-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).
Chloride 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: 630592-001, -002, -003, -004.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3095520 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; data confirmed by re-analysis.
Samples affected are: 630592-001,630592-003,630592-002.

# Certificate of Analysis Summary 630592

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Fed #001

**Project Id:**
**Contact:** Dan Moir
**Project Location:** Delaware Basin

**Date Received in Lab:** Thu Jul-11-19 12:48 pm
**Report Date:** 16-JUL-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 630592-001 | | 630592-002 | | 630592-003 | | 630592-004 | | | | | |
| | ***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:*** | Jul-10-19 00:00 | | Jul-10-19 00:00 | | Jul-10-19 00:00 | | Jul-10-19 00:00 | | | | | |
| **BTEX by EPA 8021B SUB: T104704400-18-16** | ***Extracted:*** | Jul-13-19 15:20 | | Jul-13-19 15:20 | | Jul-13-19 15:20 | | Jul-13-19 15:20 | | | | | |
| | ***Analyzed:*** | Jul-15-19 02:44 | | Jul-15-19 03:06 | | Jul-15-19 03:28 | | Jul-15-19 05:29 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.198 | 0.198 | 0.587 | 0.399 | 2.85 | 0.397 | <0.00200 | 0.00200 | | | | |
| Toluene | | 1.50 | 0.198 | 18.8 | 0.399 | 50.2 | 0.397 | <0.00200 | 0.00200 | | | | |
| Ethylbenzene | | 1.39 | 0.198 | 15.1 | 0.399 | 16.7 | 0.397 | <0.00200 | 0.00200 | | | | |
| m,p-Xylenes | | 10.1 | 0.395 | 97.3 | 0.798 | 96.2 | 0.794 | <0.00399 | 0.00399 | | | | |
| o-Xylene | | 3.67 | 0.198 | 33.3 | 0.399 | 41.0 | 0.397 | <0.00200 | 0.00200 | | | | |
| Total Xylenes | | 13.8 | 0.198 | 131 | 0.399 | 137 | 0.397 | <0.00200 | 0.00200 | | | | |
| Total BTEX | | 16.7 | 0.198 | 165 | 0.399 | 207 | 0.397 | <0.00200 | 0.00200 | | | | |
| **Chloride by EPA 300 SUB: T104704400-18-16** | ***Extracted:*** | Jul-15-19 11:00 | | Jul-15-19 11:00 | | Jul-15-19 11:00 | | Jul-15-19 11:00 | | | | | |
| | ***Analyzed:*** | Jul-15-19 14:07 | | Jul-15-19 15:54 | | Jul-15-19 16:44 | | Jul-15-19 16:52 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 452 | 4.98 | 135 | 5.00 | 843 | 5.00 | 2600 | 24.8 | | | | |
| **TPH by SW8015 Mod SUB: T104704400-18-16** | ***Extracted:*** | Jul-13-19 10:00 | | Jul-13-19 10:00 | | Jul-13-19 10:00 | | Jul-13-19 10:00 | | | | | |
| | ***Analyzed:*** | Jul-14-19 05:29 | | Jul-14-19 05:53 | | Jul-14-19 06:16 | | Jul-14-19 06:40 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | 1420 | 74.9 | 4120 | 74.8 | 5590 | 74.7 | <15.0 | 15.0 | | | | |
| Diesel Range Organics (DRO) | | 12800 | 74.9 | 20000 | 74.8 | 14000 | 74.7 | 28.4 | 15.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | 640 | 74.9 | 823 | 74.8 | 654 | 74.7 | <15.0 | 15.0 | | | | |
| Total TPH | | 14900 | 74.9 | 24900 | 74.8 | 20200 | 74.7 | 28.4 | 15.0 | | | | |
| Total GRO-DRO | | 14200 | 74.9 | 24100 | 74.8 | 19600 | 74.7 | 28.4 | 15.0 | | | | |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS01** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-001 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 07.15.19 11.00 | Basis: | Wet Weight |
| Seq Number: | 3095416 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **452** | 4.98 | mg/kg | 07.15.19 14.07 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 07.13.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3095299 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **1420** | 74.9 | mg/kg | 07.14.19 05.29 | | 5 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **12800** | 74.9 | mg/kg | 07.14.19 05.29 | | 5 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **640** | 74.9 | mg/kg | 07.14.19 05.29 | | 5 |
| **Total TPH** | PHC635 | **14900** | 74.9 | mg/kg | 07.14.19 05.29 | | 5 |
| **Total GRO-DRO** | PHC628 | **14200** | 74.9 | mg/kg | 07.14.19 05.29 | | 5 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 122 | % | 70-135 | 07.14.19 05.29 | |
| o-Terphenyl | 84-15-1 | 236 | % | 70-135 | 07.14.19 05.29 | ** |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS01** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-001 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | AMB | | | % Moisture: | |
| Analyst: | AMB | Date Prep: | 07.13.19 15.20 | Basis: | Wet Weight |
| Seq Number: | 3095520 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.198 | 0.198 | mg/kg | 07.15.19 02.44 | U | 100 |
| **Toluene** | 108-88-3 | **1.50** | 0.198 | mg/kg | 07.15.19 02.44 | | 100 |
| **Ethylbenzene** | 100-41-4 | **1.39** | 0.198 | mg/kg | 07.15.19 02.44 | | 100 |
| **m,p-Xylenes** | 179601-23-1 | **10.1** | 0.395 | mg/kg | 07.15.19 02.44 | | 100 |
| **o-Xylene** | 95-47-6 | **3.67** | 0.198 | mg/kg | 07.15.19 02.44 | | 100 |
| **Total Xylenes** | 1330-20-7 | **13.8** | 0.198 | mg/kg | 07.15.19 02.44 | | 100 |
| **Total BTEX** | | **16.7** | 0.198 | mg/kg | 07.15.19 02.44 | | 100 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 149 | % | 70-130 | 07.15.19 02.44 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 70-130 | 07.15.19 02.44 | |



Final 1.000

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS02** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-002 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 07.15.19 11.00 | Basis: | Wet Weight |
| Seq Number: | 3095416 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **135** | 5.00 | mg/kg | 07.15.19 15.54 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 07.13.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3095299 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **4120** | 74.8 | mg/kg | 07.14.19 05.53 | | 5 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **20000** | 74.8 | mg/kg | 07.14.19 05.53 | | 5 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **823** | 74.8 | mg/kg | 07.14.19 05.53 | | 5 |
| **Total TPH** | PHC635 | **24900** | 74.8 | mg/kg | 07.14.19 05.53 | | 5 |
| **Total GRO-DRO** | PHC628 | **24100** | 74.8 | mg/kg | 07.14.19 05.53 | | 5 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 113 | % | 70-135 | 07.14.19 05.53 | |
| o-Terphenyl | 84-15-1 | 281 | % | 70-135 | 07.14.19 05.53 | ** |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS02** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-002 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | AMB | | | % Moisture: | |
| Analyst: | AMB | Date Prep: | 07.13.19 15.20 | Basis: | Wet Weight |
| Seq Number: | 3095520 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Benzene** | 71-43-2 | **0.587** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |
| **Toluene** | 108-88-3 | **18.8** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |
| **Ethylbenzene** | 100-41-4 | **15.1** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |
| **m,p-Xylenes** | 179601-23-1 | **97.3** | 0.798 | mg/kg | 07.15.19 03.06 | | 200 |
| **o-Xylene** | 95-47-6 | **33.3** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |
| **Total Xylenes** | 1330-20-7 | **131** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |
| **Total BTEX** | | **165** | 0.399 | mg/kg | 07.15.19 03.06 | | 200 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 98 | % | 70-130 | 07.15.19 03.06 | |
| 4-Bromofluorobenzene | 460-00-4 | 197 | % | 70-130 | 07.15.19 03.06 | ** |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS03** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-003 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 07.15.19 11.00 | Basis: | Wet Weight |
| Seq Number: | 3095416 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **843** | 5.00 | mg/kg | 07.15.19 16.44 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 07.13.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3095299 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **5590** | 74.7 | mg/kg | 07.14.19 06.16 | | 5 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **14000** | 74.7 | mg/kg | 07.14.19 06.16 | | 5 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **654** | 74.7 | mg/kg | 07.14.19 06.16 | | 5 |
| **Total TPH** | PHC635 | **20200** | 74.7 | mg/kg | 07.14.19 06.16 | | 5 |
| **Total GRO-DRO** | PHC628 | **19600** | 74.7 | mg/kg | 07.14.19 06.16 | | 5 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 124 | % | 70-135 | 07.14.19 06.16 | |
| o-Terphenyl | 84-15-1 | 233 | % | 70-135 | 07.14.19 06.16 | ** |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS03** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-003 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | AMB | | | % Moisture: | |
| Analyst: | AMB | Date Prep: | 07.13.19 15.20 | Basis: | Wet Weight |
| Seq Number: | 3095520 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Benzene** | 71-43-2 | **2.85** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |
| **Toluene** | 108-88-3 | **50.2** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |
| **Ethylbenzene** | 100-41-4 | **16.7** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |
| **m,p-Xylenes** | 179601-23-1 | **96.2** | 0.794 | mg/kg | 07.15.19 03.28 | | 200 |
| **o-Xylene** | 95-47-6 | **41.0** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |
| **Total Xylenes** | 1330-20-7 | **137** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |
| **Total BTEX** | | **207** | 0.397 | mg/kg | 07.15.19 03.28 | | 200 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 70-130 | 07.15.19 03.28 | |
| 4-Bromofluorobenzene | 460-00-4 | 212 | % | 70-130 | 07.15.19 03.28 | ** |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS04** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-004 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 07.15.19 11.00 | Basis: | Wet Weight |
| Seq Number: | 3095416 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2600** | 24.8 | mg/kg | 07.15.19 16.52 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 07.13.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3095299 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 07.14.19 06.40 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **28.4** | 15.0 | mg/kg | 07.14.19 06.40 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 07.14.19 06.40 | U | 1 |
| **Total TPH** | PHC635 | **28.4** | 15.0 | mg/kg | 07.14.19 06.40 | | 1 |
| **Total GRO-DRO** | PHC628 | **28.4** | 15.0 | mg/kg | 07.14.19 06.40 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 95 | % | 70-135 | 07.14.19 06.40 | |
| o-Terphenyl | 84-15-1 | 100 | % | 70-135 | 07.14.19 06.40 | |

# Certificate of Analytical Results 630592

## LT Environmental, Inc., Arvada, CO

Pickett Draw Fed #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS04** | Matrix: | Soil | Date Received: | 07.11.19 12.48 |
| Lab Sample Id: | 630592-004 | Date Collected: | 07.10.19 00.00 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | AMB | | | % Moisture: | |
| Analyst: | AMB | Date Prep: | 07.13.19 15.20 | Basis: | Wet Weight |
| Seq Number: | 3095520 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 07.15.19 05.29 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 07.15.19 05.29 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 101 | % | 70-130 | 07.15.19 05.29 | |
| 1,4-Difluorobenzene | 540-36-3 | 91 | % | 70-130 | 07.15.19 05.29 | |

# 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 630592

## LT Environmental, Inc.

Pickett Draw Fed #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Solid Date Prep: 07.15.19
MB Sample Id: 7682025-1-BLK LCS Sample Id: 7682025-1-BKS LCSD Sample Id: 7682025-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | <0.858 | 250 | 240 | 96 | 240 | 96 | 90-110 | 0 | 20 | mg/kg | 07.15.19 13:52 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Soil Date Prep: 07.15.19
Parent Sample Id: 630592-001 MS Sample Id: 630592-001 S MSD Sample Id: 630592-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 452 | 249 | 671 | 88 | 672 | 88 | 90-110 | 0 | 20 | mg/kg | 07.15.19 14:19 | X |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3095416 Matrix: Soil Date Prep: 07.15.19
Parent Sample Id: 630592-002 MS Sample Id: 630592-002 S MSD Sample Id: 630592-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 135 | 250 | 367 | 93 | 367 | 93 | 90-110 | 0 | 20 | mg/kg | 07.15.19 16:01 | |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3095299 Matrix: Solid Date Prep: 07.13.19
MB Sample Id: 7681985-1-BLK LCS Sample Id: 7681985-1-BKS LCSD Sample Id: 7681985-1-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) | <8.00 | 1000 | 1160 | 116 | 1150 | 115 | 70-135 | 1 | 20 | mg/kg | 07.13.19 21:28 | |
| Diesel Range Organics (DRO) | <8.13 | 1000 | 1120 | 112 | 1180 | 118 | 70-135 | 5 | 20 | mg/kg | 07.13.19 21:28 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 105 | | 97 | | 94 | | 70-135 | % | 07.13.19 21:28 |
| o-Terphenyl | 108 | | 104 | | 111 | | 70-135 | % | 07.13.19 21:28 |

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 630592

## LT Environmental, Inc.

Pickett Draw Fed #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3095299 Matrix: Soil Date Prep: 07.13.19
Parent Sample Id: 630566-032 MS Sample Id: 630566-032 S MSD Sample Id: 630566-032 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) | 9.89 | 997 | 1040 | 103 | 1070 | 106 | 70-135 | 3 | 20 | mg/kg | 07.13.19 22:41 | |
| Diesel Range Organics (DRO) | <8.10 | 997 | 1080 | 108 | 1070 | 107 | 70-135 | 1 | 20 | mg/kg | 07.13.19 22:41 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 96 | | 97 | | 70-135 | % | 07.13.19 22:41 |
| o-Terphenyl | 110 | | 107 | | 70-135 | % | 07.13.19 22:41 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095520 Matrix: Solid Date Prep: 07.13.19
MB Sample Id: 7681948-1-BLK LCS Sample Id: 7681948-1-BKS LCSD Sample Id: 7681948-1-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 | 0.0743 | 74 | 0.0815 | 82 | 70-130 | 9 | 35 | mg/kg | 07.15.19 09:54 | |
| Toluene | <0.00200 | 0.100 | 0.0861 | 86 | 0.0948 | 95 | 70-130 | 10 | 35 | mg/kg | 07.15.19 09:54 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0853 | 85 | 0.0959 | 96 | 70-130 | 12 | 35 | mg/kg | 07.15.19 09:54 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.174 | 87 | 0.195 | 98 | 70-130 | 11 | 35 | mg/kg | 07.15.19 09:54 | |
| o-Xylene | <0.00200 | 0.100 | 0.0827 | 83 | 0.0923 | 92 | 70-130 | 11 | 35 | mg/kg | 07.15.19 09:54 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 92 | | 90 | | 94 | | 70-130 | % | 07.15.19 09:54 |
| 4-Bromofluorobenzene | 101 | | 97 | | 103 | | 70-130 | % | 07.15.19 09:54 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3095520 Matrix: Soil Date Prep: 07.13.19
Parent Sample Id: 630566-039 MS Sample Id: 630566-039 S MSD Sample Id: 630566-039 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00199 | 0.0996 | 0.0901 | 90 | 0.0759 | 76 | 70-130 | 17 | 35 | mg/kg | 07.16.19 11:43 | |
| Toluene | <0.00199 | 0.0996 | 0.0861 | 86 | 0.0881 | 88 | 70-130 | 2 | 35 | mg/kg | 07.16.19 11:43 | |
| Ethylbenzene | <0.00199 | 0.0996 | 0.0933 | 94 | 0.0821 | 82 | 70-130 | 13 | 35 | mg/kg | 07.16.19 11:43 | |
| m,p-Xylenes | <0.00398 | 0.199 | 0.189 | 95 | 0.165 | 83 | 70-130 | 14 | 35 | mg/kg | 07.16.19 11:43 | |
| o-Xylene | 0.0716 | 0.0996 | 0.0887 | 17 | 0.0797 | 8 | 70-130 | 11 | 35 | mg/kg | 07.16.19 11:43 | X |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 98 | | 99 | | 70-130 | % | 07.16.19 11:43 |
| 4-Bromofluorobenzene | 114 | | 125 | | 70-130 | % | 07.16.19 11:43 |

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

# Chain of Custody

Work Order No: 630592

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000) www.xenco.com Page 1 of 1

| | | | |
|---|---|---|---|
| Project Manager: | Dan Moir | Bill to: (if different) | Kyle Littrel |
| Company Name: | LT Environmental, Inc., Permian office | Company Name: | XTO-Energy |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, TX 79705 | City, State ZIP: | Carlsbad, NM |
| Phone: | 432.704.5178 | Email: | dmoir@ltenv.com rmcafee@ltenv.com |

**Work Order Comments**

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ uperfund ☐
State of Project:
Reporting:Level II ☐ evel III ☐ ST/UST ☐ RRP ☐ evel IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Fed #001 | Turn Around | |
| Project Number: | | Routine ☐ | |
| P.O. Number: | | Rush: 3 day | |
| Sampler's Name: | Robert McAfee | Due Date: | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | (Yes) No | Wet Ice: | (Yes) No |
| Temperature (°C): | 2.3 | Thermometer ID | |
| Received Intact: | (Yes) No | T-MM-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 | 07/10/19 | | 0.5' | 1 | X | X | X |
| SS02 | | | | | | X | X | X |
| SS03 | | | | | | X | X | X |
| SS04 | | | | | | X | X | X |

**ANALYSIS REQUEST**

**Work Order Notes**

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

**Sample Comments**

discrete

**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 | | 7/11/19 1249 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# Inter-Office Shipment



**IOS Number** **43261**

Date/Time: 07/11/19 14:38
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775692882670

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 630592-001 | S | SS01 | 07/10/19 00:00 | E300_CL | Chloride by EPA 300 | 07/15/19 | 01/06/20 | JKR | CL | |
| 630592-001 | S | SS01 | 07/10/19 00:00 | SW8015MOD_NM | TPH by SW8015 Mod | 07/15/19 | 07/24/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 630592-001 | S | SS01 | 07/10/19 00:00 | SW8021B | BTEX by EPA 8021B | 07/15/19 | 07/24/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 630592-002 | S | SS02 | 07/10/19 00:00 | SW8021B | BTEX by EPA 8021B | 07/15/19 | 07/24/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 630592-002 | S | SS02 | 07/10/19 00:00 | SW8015MOD_NM | TPH by SW8015 Mod | 07/15/19 | 07/24/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 630592-002 | S | SS02 | 07/10/19 00:00 | E300_CL | Chloride by EPA 300 | 07/15/19 | 01/06/20 | JKR | CL | |
| 630592-003 | S | SS03 | 07/10/19 00:00 | SW8021B | BTEX by EPA 8021B | 07/15/19 | 07/24/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 630592-003 | S | SS03 | 07/10/19 00:00 | SW8015MOD_NM | TPH by SW8015 Mod | 07/15/19 | 07/24/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 630592-003 | S | SS03 | 07/10/19 00:00 | E300_CL | Chloride by EPA 300 | 07/15/19 | 01/06/20 | JKR | CL | |
| 630592-004 | S | SS04 | 07/10/19 00:00 | SW8021B | BTEX by EPA 8021B | 07/15/19 | 07/24/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 630592-004 | S | SS04 | 07/10/19 00:00 | E300_CL | Chloride by EPA 300 | 07/15/19 | 01/06/20 | JKR | CL | |
| 630592-004 | S | SS04 | 07/10/19 00:00 | SW8015MOD_NM | TPH by SW8015 Mod | 07/15/19 | 07/24/19 | JKR | GRO-DRO PHCC10C28 PI | |

**Inter Office Shipment or Sample Comments:**

Relinquished By: Elizabeth McClellan

Date Relinquished: 07/11/2019

Received By: Brianna Teel

Date Received: 07/12/2019 11:42

Cooler Temperature: 0.4

# XENCO Laboratories

## Inter Office Report- Sample Receipt Checklist

**Sent To:** Midland

**IOS #:** 43261

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

**Sent By:** Elizabeth McClellan **Date Sent:** 07/11/2019 02:38 PM

**Received By:** Brianna Teel **Date Received:** 07/12/2019 11:42 AM

| 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: 07/12/2019

Brianna Teel

# XENCO Laboratories
## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 07/11/2019 12:48:00 PM

**Work Order #:** 630592

**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)? | 2.8 | |
| #2 *Shipping container in good condition? | **Yes** | |
| #3 *Samples received on ice? | **Yes** | |
| #4 *Custody Seals intact on shipping container/ cooler? | **No** | |
| #5 Custody Seals intact on sample bottles? | **No** | |
| #6*Custody Seals Signed and dated? | **N/A** | |
| #7 *Chain of Custody present? | **Yes** | |
| #8 Any missing/extra samples? | **No** | |
| #9 Chain of Custody signed when relinquished/ received? | **Yes** | |
| #10 Chain of Custody agrees with sample labels/matrix? | **Yes** | |
| #11 Container label(s) legible and intact? | **Yes** | |
| #12 Samples in proper container/ bottle? | **Yes** | |
| #13 Samples properly preserved? | **Yes** | |
| #14 Sample container(s) intact? | **Yes** | |
| #15 Sufficient sample amount for indicated test(s)? | **Yes** | |
| #16 All samples received within hold time? | **Yes** | |
| #17 Subcontract of sample(s)? | **Yes** | Subbed to Xenco 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: 07/11/2019

**Checklist reviewed by:** Jessica Kramer Date: 07/12/2019

# Analytical Report 633270

## for

## LT Environmental, Inc.

**Project Manager: Dan Moir**

**Pickett Draw Federal #001**

**012919150**

**14-AUG-19**

Collected By: Client


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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

14-AUG-19

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

Reference: XENCO Report No(s): **633270**
**Pickett Draw Federal #001**
Project Address: Eddy County

**Dan Moir**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 633270. 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. 633270 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

# Sample Cross Reference 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| PH01 | S | 08-02-19 10:50 | 2 ft | 633270-001 |
| PH02 | S | 08-02-19 11:10 | 2 ft | 633270-002 |
| PH02A | S | 08-02-19 11:25 | 6 ft | 633270-003 |
| PH03 | S | 08-02-19 11:40 | 2 ft | 633270-004 |
| PH04 | S | 08-02-19 13:20 | 2 ft | 633270-005 |
| PH05 | S | 08-05-19 10:15 | 2 ft | 633270-006 |
| PH06 | S | 08-05-19 10:40 | 2 ft | 633270-007 |
| PH07 | S | 08-05-19 12:55 | 2 ft | 633270-008 |
| PH07A | S | 08-05-19 13:00 | 4 ft | 633270-009 |
| PH08 | S | 08-05-19 13:50 | 2 ft | 633270-010 |
| PH08A | S | 08-05-19 14:00 | 4 ft | 633270-011 |
| PH09 | S | 08-05-19 14:10 | 2 ft | 633270-012 |
| PH09A | S | 08-05-19 14:20 | 4 ft | 633270-013 |

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3098324 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 633270-005,633270-006.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

# Certificate of Analysis Summary 633270

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-06-19 04:24 pm
**Report Date:** 14-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 633270-001 | | 633270-002 | | 633270-003 | | 633270-004 | | 633270-005 | | 633270-006 | |
| | ***Field Id:*** | PH01 | | PH02 | | PH02A | | PH03 | | PH04 | | PH05 | |
| | ***Depth:*** | 2- ft | | 2- ft | | 6- ft | | 2- ft | | 2- ft | | 2- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-02-19 10:50 | | Aug-02-19 11:10 | | Aug-02-19 11:25 | | Aug-02-19 11:40 | | Aug-02-19 13:20 | | Aug-05-19 10:15 | |
| **BTEX by EPA 8021B SUB: T104704400-18-16** | ***Extracted:*** | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | |
| | ***Analyzed:*** | Aug-11-19 16:38 | | Aug-11-19 16:58 | | Aug-11-19 17:18 | | Aug-11-19 17:39 | | Aug-11-19 17:59 | | Aug-11-19 18:19 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 0.00626 | 0.00199 | 0.0863 | 0.00198 |
| Toluene | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 0.228 | 0.00199 | 7.10 D | 0.0495 |
| Ethylbenzene | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 0.280 | 0.00199 | 5.01 D | 0.0495 |
| m,p-Xylenes | | <0.00398 | 0.00398 | <0.00398 | 0.00398 | <0.00402 | 0.00402 | <0.00400 | 0.00400 | 2.16 D | 0.0398 | 7.59 | 0.00396 |
| o-Xylene | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 1.89 D | 0.0199 | 7.84 D | 0.0495 |
| Total Xylenes | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 4.05 | 0.0199 | 15.4 | 0.00396 |
| Total BTEX | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | 4.56 | 0.00199 | 27.6 | 0.00198 |
| **Chloride by EPA 300 SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 14:40 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | |
| | ***Analyzed:*** | Aug-09-19 11:15 | | Aug-08-19 17:46 | | Aug-08-19 18:05 | | Aug-08-19 18:12 | | Aug-08-19 18:18 | | Aug-08-19 18:24 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 875 | 5.02 | 140 | 5.04 | 15.0 | 4.96 | 1550 | 24.9 | 511 | 4.95 | 123 | 5.02 |
| **TPH by SW8015 Mod SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | |
| | ***Analyzed:*** | Aug-12-19 18:35 | | Aug-12-19 18:54 | | Aug-12-19 19:13 | | Aug-12-19 19:51 | | Aug-12-19 20:09 | | Aug-12-19 20:28 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | 526 | 15.0 | 2150 | 15.0 |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | 27.6 | 15.0 | <15.0 | 15.0 | 144 | 15.0 | 2630 | 15.0 | 4720 | 15.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | 19.3 | 15.0 | 283 | 15.0 | 338 | 15.0 |
| Total TPH | | <15.0 | 15.0 | 27.6 | 15.0 | <15.0 | 15.0 | 163 | 15.0 | 3440 | 15.0 | 7210 | 15.0 |
| Total GRO-DRO | | <15.0 | 15.0 | 27.6 | 15.0 | <15.0 | 15.0 | 144 | 15.0 | 3160 | 15.0 | 6870 | 15.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 633270

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-06-19 04:24 pm
**Report Date:** 14-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 633270-007 | | 633270-008 | | 633270-009 | | 633270-010 | | 633270-011 | | 633270-012 | |
| | ***Field Id:*** | PH06 | | PH07 | | PH07A | | PH08 | | PH08A | | PH09 | |
| | ***Depth:*** | 2- ft | | 2- ft | | 4- ft | | 2- ft | | 4- ft | | 2- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-05-19 10:40 | | Aug-05-19 12:55 | | Aug-05-19 13:00 | | Aug-05-19 13:50 | | Aug-05-19 14:00 | | Aug-05-19 14:10 | |
| **BTEX by EPA 8021B SUB: T104704400-18-16** | ***Extracted:*** | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | | Aug-09-19 11:30 | |
| | ***Analyzed:*** | Aug-11-19 18:39 | | Aug-11-19 18:59 | | Aug-11-19 19:19 | | Aug-11-19 19:39 | | Aug-11-19 20:39 | | Aug-11-19 20:59 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| Toluene | | 0.00372 | 0.00199 | 0.00315 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| Ethylbenzene | | 0.00447 | 0.00199 | 0.00266 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| m,p-Xylenes | | 0.00888 | 0.00398 | 0.00773 | 0.00399 | <0.00400 | 0.00400 | <0.00398 | 0.00398 | <0.00400 | 0.00400 | <0.00399 | 0.00399 |
| o-Xylene | | 0.00655 | 0.00199 | 0.00465 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| Total Xylenes | | 0.0154 | 0.00199 | 0.0124 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| Total BTEX | | 0.0236 | 0.00199 | 0.0182 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 |
| **Chloride by EPA 300 SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | | Aug-08-19 15:00 | |
| | ***Analyzed:*** | Aug-08-19 18:43 | | Aug-08-19 18:50 | | Aug-08-19 18:56 | | Aug-08-19 19:02 | | Aug-08-19 19:09 | | Aug-08-19 19:15 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 420 | 5.00 | 842 | 4.96 | 508 | 5.05 | 24.4 | 5.05 | 56.7 | 5.05 | 145 | 4.98 |
| **TPH by SW8015 Mod SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | | Aug-08-19 14:00 | |
| | ***Analyzed:*** | Aug-12-19 20:47 | | Aug-12-19 21:06 | | Aug-12-19 21:25 | | Aug-12-19 21:44 | | Aug-12-19 22:02 | | Aug-12-19 22:21 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | 323 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | 53.6 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Total TPH | | <15.0 | 15.0 | 377 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |
| Total GRO-DRO | | <15.0 | 15.0 | 323 | 15.0 | <15.0 | 15.0 | <14.9 | 14.9 | <15.0 | 15.0 | <15.0 | 15.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 633270

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-06-19 04:24 pm
**Report Date:** 14-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | |
|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 633270-013 | | | | | |
| | ***Field Id:*** | PH09A | | | | | |
| | ***Depth:*** | 4- ft | | | | | |
| | ***Matrix:*** | SOIL | | | | | |
| | ***Sampled:*** | Aug-05-19 14:20 | | | | | |
| **BTEX by EPA 8021B SUB: T104704400-18-16** | ***Extracted:*** | Aug-09-19 11:30 | | | | | |
| | ***Analyzed:*** | Aug-11-19 21:19 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | |
| Benzene | | <0.00198 | 0.00198 | | | | |
| Toluene | | <0.00198 | 0.00198 | | | | |
| Ethylbenzene | | <0.00198 | 0.00198 | | | | |
| m,p-Xylenes | | <0.00397 | 0.00397 | | | | |
| o-Xylene | | <0.00198 | 0.00198 | | | | |
| Total Xylenes | | <0.00198 | 0.00198 | | | | |
| Total BTEX | | <0.00198 | 0.00198 | | | | |
| **Chloride by EPA 300 SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 15:00 | | | | | |
| | ***Analyzed:*** | Aug-08-19 19:34 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | |
| Chloride | | 311 | 5.00 | | | | |
| **TPH by SW8015 Mod SUB: T104704400-18-16** | ***Extracted:*** | Aug-08-19 14:00 | | | | | |
| | ***Analyzed:*** | Aug-12-19 22:40 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | | | | |
| Diesel Range Organics (DRO) | | <15.0 | 15.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | | | | |
| Total TPH | | <15.0 | 15.0 | | | | |
| Total GRO-DRO | | <15.0 | 15.0 | | | | |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH01** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-001 | Date Collected: | 08.02.19 10.50 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 14.40 | Basis: | Wet Weight |
| Seq Number: | 3098080 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **875** | 5.02 | mg/kg | 08.09.19 11.15 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 18.35 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 18.35 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 18.35 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 18.35 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 18.35 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 92 | % | 70-135 | 08.12.19 18.35 | |
| o-Terphenyl | 84-15-1 | 94 | % | 70-135 | 08.12.19 18.35 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH01** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-001 | Date Collected: | 08.02.19 10.50 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 08.11.19 16.38 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.38 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.11.19 16.38 | |
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 70-130 | 08.11.19 16.38 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH02** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-002 | Date Collected: | 08.02.19 11.10 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **140** | 5.04 | mg/kg | 08.08.19 17.46 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 18.54 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **27.6** | 15.0 | mg/kg | 08.12.19 18.54 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 18.54 | U | 1 |
| **Total TPH** | PHC635 | **27.6** | 15.0 | mg/kg | 08.12.19 18.54 | | 1 |
| **Total GRO-DRO** | PHC628 | **27.6** | 15.0 | mg/kg | 08.12.19 18.54 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 97 | % | 70-135 | 08.12.19 18.54 | |
| o-Terphenyl | 84-15-1 | 98 | % | 70-135 | 08.12.19 18.54 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH02** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-002 | Date Collected: | 08.02.19 11.10 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 08.11.19 16.58 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 08.11.19 16.58 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 114 | % | 70-130 | 08.11.19 16.58 | |
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 70-130 | 08.11.19 16.58 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH02A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-003 | Date Collected: | 08.02.19 11.25 | Sample Depth: | 6 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **15.0** | 4.96 | mg/kg | 08.08.19 18.05 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 19.13 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 19.13 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 19.13 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 19.13 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 19.13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 08.12.19 19.13 | |
| o-Terphenyl | 84-15-1 | 92 | % | 70-135 | 08.12.19 19.13 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH02A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-003 | Date Collected: | 08.02.19 11.25 | Sample Depth: | 6 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |
| Toluene | 108-88-3 | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00402 | 0.00402 | mg/kg | 08.11.19 17.18 | U | 1 |
| o-Xylene | 95-47-6 | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |
| Total BTEX | | <0.00201 | 0.00201 | mg/kg | 08.11.19 17.18 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 104 | % | 70-130 | 08.11.19 17.18 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.11.19 17.18 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH03** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-004 | Date Collected: | 08.02.19 11.40 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1550** | 24.9 | mg/kg | 08.08.19 18.12 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 19.51 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **144** | 15.0 | mg/kg | 08.12.19 19.51 | | 1 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **19.3** | 15.0 | mg/kg | 08.12.19 19.51 | | 1 |
| **Total TPH** | PHC635 | **163** | 15.0 | mg/kg | 08.12.19 19.51 | | 1 |
| **Total GRO-DRO** | PHC628 | **144** | 15.0 | mg/kg | 08.12.19 19.51 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 92 | % | 70-135 | 08.12.19 19.51 | |
| o-Terphenyl | 84-15-1 | 96 | % | 70-135 | 08.12.19 19.51 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH03** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-004 | Date Collected: | 08.02.19 11.40 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 08.11.19 17.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 08.11.19 17.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 116 | % | 70-130 | 08.11.19 17.39 | |
| 1,4-Difluorobenzene | 540-36-3 | 108 | % | 70-130 | 08.11.19 17.39 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH04** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-005 | Date Collected: | 08.02.19 13.20 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **511** | 4.95 | mg/kg | 08.08.19 18.18 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **526** | 15.0 | mg/kg | 08.12.19 20.09 | | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **2630** | 15.0 | mg/kg | 08.12.19 20.09 | | 1 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **283** | 15.0 | mg/kg | 08.12.19 20.09 | | 1 |
| **Total TPH** | PHC635 | **3440** | 15.0 | mg/kg | 08.12.19 20.09 | | 1 |
| **Total GRO-DRO** | PHC628 | **3160** | 15.0 | mg/kg | 08.12.19 20.09 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 121 | % | 70-135 | 08.12.19 20.09 | |
| o-Terphenyl | 84-15-1 | 88 | % | 70-135 | 08.12.19 20.09 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH04** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-005 | Date Collected: | 08.02.19 13.20 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Benzene** | 71-43-2 | **0.00626** | 0.00199 | mg/kg | 08.11.19 17.59 | | 1 |
| **Toluene** | 108-88-3 | **0.228** | 0.00199 | mg/kg | 08.11.19 17.59 | | 1 |
| **Ethylbenzene** | 100-41-4 | **0.280** | 0.00199 | mg/kg | 08.11.19 17.59 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **2.16** | 0.0398 | mg/kg | 08.13.19 20.14 | D | 10 |
| **o-Xylene** | 95-47-6 | **1.89** | 0.0199 | mg/kg | 08.13.19 20.14 | D | 10 |
| **Total Xylenes** | 1330-20-7 | **4.05** | 0.0199 | mg/kg | 08.13.19 20.14 | | 10 |
| **Total BTEX** | | **4.56** | 0.00199 | mg/kg | 08.13.19 20.14 | | 10 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 188 | % | 70-130 | 08.11.19 17.59 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 121 | % | 70-130 | 08.11.19 17.59 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH05** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-006 | Date Collected: | 08.05.19 10.15 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **123** | 5.02 | mg/kg | 08.08.19 18.24 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **2150** | 15.0 | mg/kg | 08.12.19 20.28 | | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **4720** | 15.0 | mg/kg | 08.12.19 20.28 | | 1 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **338** | 15.0 | mg/kg | 08.12.19 20.28 | | 1 |
| **Total TPH** | PHC635 | **7210** | 15.0 | mg/kg | 08.12.19 20.28 | | 1 |
| **Total GRO-DRO** | PHC628 | **6870** | 15.0 | mg/kg | 08.12.19 20.28 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.12.19 20.28 | |
| o-Terphenyl | 84-15-1 | 112 | % | 70-135 | 08.12.19 20.28 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH05** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-006 | Date Collected: | 08.05.19 10.15 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Benzene** | 71-43-2 | **0.0863** | 0.00198 | mg/kg | 08.11.19 18.19 | | 1 |
| **Toluene** | 108-88-3 | **7.10** | 0.0495 | mg/kg | 08.13.19 20.35 | D | 25 |
| **Ethylbenzene** | 100-41-4 | **5.01** | 0.0495 | mg/kg | 08.13.19 20.35 | D | 25 |
| **m,p-Xylenes** | 179601-23-1 | **7.59** | 0.00396 | mg/kg | 08.11.19 18.19 | | 1 |
| **o-Xylene** | 95-47-6 | **7.84** | 0.0495 | mg/kg | 08.13.19 20.35 | D | 25 |
| **Total Xylenes** | 1330-20-7 | **15.4** | 0.00396 | mg/kg | 08.13.19 20.35 | | 25 |
| **Total BTEX** | | **27.6** | 0.00198 | mg/kg | 08.13.19 20.35 | | 25 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 1400 | % | 70-130 | 08.11.19 18.19 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 83 | % | 70-130 | 08.11.19 18.19 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH06** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-007 | Date Collected: | 08.05.19 10.40 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **420** | 5.00 | mg/kg | 08.08.19 18.43 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 20.47 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 20.47 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 20.47 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 20.47 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 20.47 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 94 | % | 70-135 | 08.12.19 20.47 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 08.12.19 20.47 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH06** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-007 | Date Collected: | 08.05.19 10.40 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 08.11.19 18.39 | U | 1 |
| **Toluene** | 108-88-3 | **0.00372** | 0.00199 | mg/kg | 08.11.19 18.39 | | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00447** | 0.00199 | mg/kg | 08.11.19 18.39 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.00888** | 0.00398 | mg/kg | 08.11.19 18.39 | | 1 |
| **o-Xylene** | 95-47-6 | **0.00655** | 0.00199 | mg/kg | 08.11.19 18.39 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0154** | 0.00199 | mg/kg | 08.11.19 18.39 | | 1 |
| **Total BTEX** | | **0.0236** | 0.00199 | mg/kg | 08.11.19 18.39 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 70-130 | 08.11.19 18.39 | |
| 4-Bromofluorobenzene | 460-00-4 | 108 | % | 70-130 | 08.11.19 18.39 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH07** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-008 | Date Collected: | 08.05.19 12.55 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **842** | 4.96 | mg/kg | 08.08.19 18.50 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 21.06 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **323** | 15.0 | mg/kg | 08.12.19 21.06 | | 1 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **53.6** | 15.0 | mg/kg | 08.12.19 21.06 | | 1 |
| **Total TPH** | PHC635 | **377** | 15.0 | mg/kg | 08.12.19 21.06 | | 1 |
| **Total GRO-DRO** | PHC628 | **323** | 15.0 | mg/kg | 08.12.19 21.06 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 94 | % | 70-135 | 08.12.19 21.06 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 08.12.19 21.06 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH07** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-008 | Date Collected: | 08.05.19 12.55 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.11.19 18.59 | U | 1 |
| **Toluene** | 108-88-3 | **0.00315** | 0.00200 | mg/kg | 08.11.19 18.59 | | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00266** | 0.00200 | mg/kg | 08.11.19 18.59 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.00773** | 0.00399 | mg/kg | 08.11.19 18.59 | | 1 |
| **o-Xylene** | 95-47-6 | **0.00465** | 0.00200 | mg/kg | 08.11.19 18.59 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0124** | 0.00200 | mg/kg | 08.11.19 18.59 | | 1 |
| **Total BTEX** | | **0.0182** | 0.00200 | mg/kg | 08.11.19 18.59 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.11.19 18.59 | |
| 4-Bromofluorobenzene | 460-00-4 | 108 | % | 70-130 | 08.11.19 18.59 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH07A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-009 | Date Collected: | 08.05.19 13.00 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **508** | 5.05 | mg/kg | 08.08.19 18.56 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 21.25 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 21.25 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 21.25 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 21.25 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 21.25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 08.12.19 21.25 | |
| o-Terphenyl | 84-15-1 | 92 | % | 70-135 | 08.12.19 21.25 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH07A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-009 | Date Collected: | 08.05.19 13.00 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 08.11.19 19.19 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 08.11.19 19.19 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 108 | % | 70-130 | 08.11.19 19.19 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.11.19 19.19 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH08** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-010 | Date Collected: | 08.05.19 13.50 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **24.4** | 5.05 | mg/kg | 08.08.19 19.02 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <14.9 | 14.9 | mg/kg | 08.12.19 21.44 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <14.9 | 14.9 | mg/kg | 08.12.19 21.44 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <14.9 | 14.9 | mg/kg | 08.12.19 21.44 | U | 1 |
| Total TPH | PHC635 | <14.9 | 14.9 | mg/kg | 08.12.19 21.44 | U | 1 |
| Total GRO-DRO | PHC628 | <14.9 | 14.9 | mg/kg | 08.12.19 21.44 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 87 | % | 70-135 | 08.12.19 21.44 | |
| o-Terphenyl | 84-15-1 | 87 | % | 70-135 | 08.12.19 21.44 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH08** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-010 | Date Collected: | 08.05.19 13.50 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 08.11.19 19.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 08.11.19 19.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 108 | % | 70-130 | 08.11.19 19.39 | |
| 4-Bromofluorobenzene | 460-00-4 | 110 | % | 70-130 | 08.11.19 19.39 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH08A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-011 | Date Collected: | 08.05.19 14.00 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **56.7** | 5.05 | mg/kg | 08.08.19 19.09 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 22.02 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 22.02 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 22.02 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 22.02 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 22.02 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 92 | % | 70-135 | 08.12.19 22.02 | |
| o-Terphenyl | 84-15-1 | 91 | % | 70-135 | 08.12.19 22.02 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH08A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-011 | Date Collected: | 08.05.19 14.00 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00400 | 0.00400 | mg/kg | 08.11.19 20.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 106 | % | 70-130 | 08.11.19 20.39 | |
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.11.19 20.39 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH09** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-012 | Date Collected: | 08.05.19 14.10 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **145** | 4.98 | mg/kg | 08.08.19 19.15 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 22.21 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 22.21 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 22.21 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 22.21 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 22.21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 90 | % | 70-135 | 08.12.19 22.21 | |
| o-Terphenyl | 84-15-1 | 90 | % | 70-135 | 08.12.19 22.21 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH09** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-012 | Date Collected: | 08.05.19 14.10 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 08.11.19 20.59 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 08.11.19 20.59 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 107 | % | 70-130 | 08.11.19 20.59 | |
| 4-Bromofluorobenzene | 460-00-4 | 102 | % | 70-130 | 08.11.19 20.59 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH09A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-013 | Date Collected: | 08.05.19 14.20 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3097992 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **311** | 5.00 | mg/kg | 08.08.19 19.34 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.08.19 14.00 | Basis: | Wet Weight |
| Seq Number: | 3098275 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.12.19 22.40 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.12.19 22.40 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.12.19 22.40 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.12.19 22.40 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.12.19 22.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 08.12.19 22.40 | |
| o-Terphenyl | 84-15-1 | 90 | % | 70-135 | 08.12.19 22.40 | |

# Certificate of Analytical Results 633270

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH09A** | Matrix: | Soil | Date Received: | 08.06.19 16.24 |
| Lab Sample Id: | 633270-013 | Date Collected: | 08.05.19 14.20 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.09.19 11.30 | Basis: | Wet Weight |
| Seq Number: | 3098324 | | | SUB: | T104704400-18-16 |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 08.11.19 21.19 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 08.11.19 21.19 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 88 | % | 70-130 | 08.11.19 21.19 | |
| 4-Bromofluorobenzene | 460-00-4 | 105 | % | 70-130 | 08.11.19 21.19 | |

# 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 633270

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683802-1-BLK LCS Sample Id: 7683802-1-BKS LCSD Sample Id: 7683802-1-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 | 261 | 104 | 261 | 104 | 90-110 | 0 | 20 | mg/kg | 08.09.19 08:12 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683833-1-BLK LCS Sample Id: 7683833-1-BKS LCSD Sample Id: 7683833-1-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 | 251 | 100 | 90-110 | 0 | 20 | mg/kg | 08.08.19 17:34 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633244-003 MS Sample Id: 633244-003 S MSD Sample Id: 633244-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10.2 | 250 | 267 | 103 | 267 | 103 | 90-110 | 0 | 20 | mg/kg | 08.09.19 09:59 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098080 Matrix: Sludge Date Prep: 08.08.19
Parent Sample Id: 633426-001 MS Sample Id: 633426-001 S MSD Sample Id: 633426-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 198 | 253 | 456 | 102 | 456 | 102 | 90-110 | 0 | 20 | mg/kg | 08.09.19 08:31 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633270-002 MS Sample Id: 633270-002 S MSD Sample Id: 633270-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 140 | 252 | 395 | 101 | 395 | 101 | 90-110 | 0 | 20 | mg/kg | 08.08.19 17:53 | |

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 633270

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097992 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633270-012 MS Sample Id: 633270-012 S MSD Sample Id: 633270-012 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 145 | 249 | 404 | 104 | 403 | 104 | 90-110 | 0 | 20 | mg/kg | 08.08.19 19:21 | |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098275 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683831-1-BLK LCS Sample Id: 7683831-1-BKS LCSD Sample Id: 7683831-1-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) | <8.00 | 1000 | 989 | 99 | 1020 | 102 | 70-135 | 3 | 20 | mg/kg | 08.12.19 15:04 | |
| Diesel Range Organics (DRO) | <8.13 | 1000 | 985 | 99 | 963 | 96 | 70-135 | 2 | 20 | mg/kg | 08.12.19 15:04 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 97 | | 114 | | 114 | | 70-135 | % | 08.12.19 15:04 |
| o-Terphenyl | 98 | | 99 | | 99 | | 70-135 | % | 08.12.19 15:04 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098275 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633262-001 MS Sample Id: 633262-001 S MSD Sample Id: 633262-001 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) | <7.98 | 997 | 1100 | 110 | 1160 | 116 | 70-135 | 5 | 20 | mg/kg | 08.12.19 16:01 | |
| Diesel Range Organics (DRO) | 48.3 | 997 | 1130 | 108 | 1130 | 109 | 70-135 | 0 | 20 | mg/kg | 08.12.19 16:01 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 120 | | 122 | | 70-135 | % | 08.12.19 16:01 |
| o-Terphenyl | 100 | | 104 | | 70-135 | % | 08.12.19 16:01 |

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

# QC Summary 633270

## LT Environmental, Inc.

Pickett Draw Federal #001

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

Seq Number: 3098324 Matrix: Solid Date Prep: 08.09.19

MB Sample Id: 7683899-1-BLK LCS Sample Id: 7683899-1-BKS LCSD Sample Id: 7683899-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.000385 | 0.100 | 0.103 | 103 | 0.0882 | 88 | 70-130 | 15 | 35 | mg/kg | 08.11.19 14:38 | |
| Toluene | <0.000456 | 0.100 | 0.0904 | 90 | 0.0799 | 80 | 70-130 | 12 | 35 | mg/kg | 08.11.19 14:38 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0875 | 88 | 0.0781 | 78 | 70-130 | 11 | 35 | mg/kg | 08.11.19 14:38 | |
| m,p-Xylenes | <0.00101 | 0.200 | 0.172 | 86 | 0.155 | 78 | 70-130 | 10 | 35 | mg/kg | 08.11.19 14:38 | |
| o-Xylene | <0.000344 | 0.100 | 0.0907 | 91 | 0.0826 | 83 | 70-130 | 9 | 35 | mg/kg | 08.11.19 14:38 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 105 | | 102 | | 103 | | 70-130 | % | 08.11.19 14:38 |
| 4-Bromofluorobenzene | 99 | | 99 | | 104 | | 70-130 | % | 08.11.19 14:38 |

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

Seq Number: 3098324 Matrix: Soil Date Prep: 08.09.19

Parent Sample Id: 633270-001 MS Sample Id: 633270-001 S

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | Limits | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00198 | 0.0992 | 0.0933 | 94 | 70-130 | mg/kg | 08.11.19 15:19 | |
| Toluene | 0.000538 | 0.0992 | 0.0813 | 81 | 70-130 | mg/kg | 08.11.19 15:19 | |
| Ethylbenzene | <0.00198 | 0.0992 | 0.0771 | 78 | 70-130 | mg/kg | 08.11.19 15:19 | |
| m,p-Xylenes | <0.00101 | 0.198 | 0.147 | 74 | 70-130 | mg/kg | 08.11.19 15:19 | |
| o-Xylene | 0.000349 | 0.0992 | 0.0844 | 85 | 70-130 | mg/kg | 08.11.19 15:19 | |

| Surrogate | MS %Rec | MS Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 106 | | 70-130 | % | 08.11.19 15:19 |
| 4-Bromofluorobenzene | 115 | | 70-130 | % | 08.11.19 15:19 |

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

# Chain of Custody

Work Order No: 1033270

XENCO LABORATORIES

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

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 12919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes (No) | Wet Ice: | (Yes) No |
| Temperature (°C): | 4.2 | 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: | 13 |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |
|---|---|---|---|---|---|---|---|---|
| PH01 | S | 08/02/2019 | 10:50 | 2' | 1 | | | |
| PH02 | S | | 11:10 | 2' | 1 | | | |
| PH02A | S | | 11:25 | 6' | 1 | | | |
| PH03 | S | | 11:40 | 2' | 1 | | | |
| PH04 | S | | 13:20 | 2' | 1 | | | |
| PH05 | S | 08/05/2019 | 10:15 | 2' | 1 | | | |
| PH06 | S | | 10:40 | 2' | 1 | | | |
| PH07 | S | | 12:55 | 2' | 1 | | | |
| PH07A | S | | 13:00 | 4' | 1 | | | |
| PH08 | S | | 13:50 | 2' | 1 | | | |

**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 | | Anna Byers | 8/6/19 @ 1600 | 2 Anna Byers | | 8/6/19 16:24 |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# Chain of Custody

XENCO LABORATORIES

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

**Work Order No:** 633270

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 12919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Temperature (°C): | 4.2 | Thermometer ID | See pg. 1 | |
| Received Intact: | Yes No | | | |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | 0 | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| PH08A | S | 08/05/19 | 14:00 | 4' | 1 | X | X | X |
| PH09 | S | | 14:10 | 2' | 1 | X | X | X |
| PH09A | S | | 14:20 | 4' | 1 | X | X | X |

**ANALYSIS REQUEST**

**Work Order Notes**

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

**Sample Comments**

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



| | Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|---|
| 1 | | Anna Byers | 8/6/19 @ 600 | 2 Anna Byers | | 8/6/19 16:24 |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# Inter-Office Shipment



**IOS Number** **45749**

Date/Time: 08/07/19 11:19
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

Lab# From: **Carlsbad**
Delivery Priority:
Address: 1089 N Canal Street

Lab# To: **Midland**
Air Bill No.: 7759305855567
E-Mail: jessica.kramer@xenco.com

| Sample Id | Matrix | Client Sample Id | Sample Collection | Method | Method Name | Lab Due | HT Due | PM | Analytes | Sign |
|---|---|---|---|---|---|---|---|---|---|---|
| 633270-001 | S | PH01 | 08/02/19 10:50 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/16/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-001 | S | PH01 | 08/02/19 10:50 | E300_CL | Chloride by EPA 300 | 08/12/19 | 01/29/20 | JKR | CL | |
| 633270-001 | S | PH01 | 08/02/19 10:50 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/16/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-002 | S | PH02 | 08/02/19 11:10 | E300_CL | Chloride by EPA 300 | 08/12/19 | 01/29/20 | JKR | CL | |
| 633270-002 | S | PH02 | 08/02/19 11:10 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/16/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-002 | S | PH02 | 08/02/19 11:10 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/16/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-003 | S | PH02A | 08/02/19 11:25 | E300_CL | Chloride by EPA 300 | 08/12/19 | 01/29/20 | JKR | CL | |
| 633270-003 | S | PH02A | 08/02/19 11:25 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/16/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-003 | S | PH02A | 08/02/19 11:25 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/16/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-004 | S | PH03 | 08/02/19 11:40 | E300_CL | Chloride by EPA 300 | 08/12/19 | 01/29/20 | JKR | CL | |
| 633270-004 | S | PH03 | 08/02/19 11:40 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/16/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-004 | S | PH03 | 08/02/19 11:40 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/16/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-005 | S | PH04 | 08/02/19 13:20 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/16/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-005 | S | PH04 | 08/02/19 13:20 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/16/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-005 | S | PH04 | 08/02/19 13:20 | E300_CL | Chloride by EPA 300 | 08/12/19 | 01/29/20 | JKR | CL | |
| 633270-006 | S | PH05 | 08/05/19 10:15 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-006 | S | PH05 | 08/05/19 10:15 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-006 | S | PH05 | 08/05/19 10:15 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-007 | S | PH06 | 08/05/19 10:40 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-007 | S | PH06 | 08/05/19 10:40 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-007 | S | PH06 | 08/05/19 10:40 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-008 | S | PH07 | 08/05/19 12:55 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-008 | S | PH07 | 08/05/19 12:55 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-008 | S | PH07 | 08/05/19 12:55 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-009 | S | PH07A | 08/05/19 13:00 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |

# Inter-Office Shipment



**IOS Number** **45749**

Date/Time: 08/07/19 11:19
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 7759305855567

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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 633270-009 | S | PH07A | 08/05/19 13:00 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-009 | S | PH07A | 08/05/19 13:00 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-010 | S | PH08 | 08/05/19 13:50 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-010 | S | PH08 | 08/05/19 13:50 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-010 | S | PH08 | 08/05/19 13:50 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-011 | S | PH08A | 08/05/19 14:00 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-011 | S | PH08A | 08/05/19 14:00 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-011 | S | PH08A | 08/05/19 14:00 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-012 | S | PH09 | 08/05/19 14:10 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-012 | S | PH09 | 08/05/19 14:10 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |
| 633270-012 | S | PH09 | 08/05/19 14:10 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-013 | S | PH09A | 08/05/19 14:20 | E300_CL | Chloride by EPA 300 | 08/12/19 | 02/01/20 | JKR | CL | |
| 633270-013 | S | PH09A | 08/05/19 14:20 | SW8021B | BTEX by EPA 8021B | 08/12/19 | 08/19/19 | JKR | BR4FBZ BZ BZME EBZ X | |
| 633270-013 | S | PH09A | 08/05/19 14:20 | SW8015MOD_NM | TPH by SW8015 Mod | 08/12/19 | 08/19/19 | JKR | GRO-DRO PHCC10C28 PI | |

**Inter Office Shipment or Sample Comments:**

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/07/2019

Received By: Brianna Teel

Date Received: 08/08/2019 11:05

Cooler Temperature: 0.5

# XENCO Laboratories

## Inter Office Report- Sample Receipt Checklist

**Sent To:** Midland

**IOS #:** 45749

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

**Sent By:** Elizabeth McClellan **Date Sent:** 08/07/2019 11:19 AM

**Received By:** Brianna Teel **Date Received:** 08/08/2019 11:05 AM

| Sample Receipt Checklist | | Comments |
|---|---|---|
| #1 *Temperature of cooler(s)? | .5 | |
| #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: 08/08/2019

Brianna Teel

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 08/06/2019 04:24:00 PM

**Work Order #:** 633270

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

**Temperature Measuring device used : T-NM-007**

| Sample Receipt Checklist | | Comments |
|---|---|---|
| #1 *Temperature of cooler(s)? | 4.2 | |
| #2 *Shipping container in good condition? | **Yes** | |
| #3 *Samples received on ice? | **Yes** | |
| #4 *Custody Seals intact on shipping container/ cooler? | **No** | |
| #5 Custody Seals intact on sample bottles? | **No** | |
| #6*Custody Seals Signed and dated? | **N/A** | |
| #7 *Chain of Custody present? | **Yes** | |
| #8 Any missing/extra samples? | **No** | |
| #9 Chain of Custody signed when relinquished/ received? | **Yes** | |
| #10 Chain of Custody agrees with sample labels/matrix? | **Yes** | |
| #11 Container label(s) legible and intact? | **Yes** | |
| #12 Samples in proper container/ bottle? | **Yes** | |
| #13 Samples properly preserved? | **Yes** | |
| #14 Sample container(s) intact? | **Yes** | |
| #15 Sufficient sample amount for indicated test(s)? | **Yes** | |
| #16 All samples received within hold time? | **Yes** | |
| #17 Subcontract of sample(s)? | **Yes** | Subbed to Xenco 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: 08/07/2019

**Checklist reviewed by:** Kalei Stout Date: 08/08/2019

# Analytical Report 633408

## for

## LT Environmental, Inc.

**Project Manager: Dan Moir**

**Pickett Draw Federal #001**

**12919150**

**12-AUG-19**

Collected By: Client

**1211 W. Florida Ave**
**Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

12-AUG-19

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

Reference: XENCO Report No(s): **633408**
**Pickett Draw Federal #001**
Project Address: Eddy County

**Dan Moir**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 633408. 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. 633408 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

# Sample Cross Reference 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| PH03A | S | 08-02-19 13:00 | 20 ft | 633408-001 |
| PH04A | S | 08-05-19 09:55 | 20 ft | 633408-002 |
| PH05A | S | 08-05-19 10:25 | 14 ft | 633408-003 |
| PH06A | S | 08-05-19 12:00 | 16 ft | 633408-004 |

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3098269 BTEX by EPA 8021B

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

# Certificate of Analysis Summary 633408

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 12919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Thu Aug-08-19 11:05 am
**Report Date:** 12-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 633408-001 | | 633408-002 | | 633408-003 | | 633408-004 | | | | | |
| | ***Field Id:*** | PH03A | | PH04A | | PH05A | | PH06A | | | | | |
| | ***Depth:*** | 20- ft | | 20- ft | | 14- ft | | 16- ft | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | Aug-02-19 13:00 | | Aug-05-19 09:55 | | Aug-05-19 10:25 | | Aug-05-19 12:00 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-08-19 15:16 | | Aug-08-19 15:16 | | Aug-08-19 15:16 | | Aug-08-19 15:16 | | | | | |
| | ***Analyzed:*** | Aug-10-19 11:42 | | Aug-10-19 12:03 | | Aug-10-19 12:23 | | Aug-10-19 12:43 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Toluene | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Ethylbenzene | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| m,p-Xylenes | | <0.00397 | 0.00397 | <0.00396 | 0.00396 | <0.00399 | 0.00399 | <0.00398 | 0.00398 | | | | |
| o-Xylene | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Total Xylenes | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| Total BTEX | | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-08-19 13:30 | | Aug-08-19 13:30 | | Aug-08-19 13:30 | | Aug-08-19 13:30 | | | | | |
| | ***Analyzed:*** | Aug-08-19 14:09 | | Aug-08-19 15:19 | | Aug-08-19 15:25 | | Aug-08-19 15:31 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 16.4 | 5.00 | 1750 | 24.8 | 813 | 5.00 | 5430 | 50.2 | | | | |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-09-19 15:00 | | Aug-09-19 15:00 | | Aug-09-19 15:00 | | Aug-09-19 15:00 | | | | | |
| | ***Analyzed:*** | Aug-11-19 04:55 | | Aug-11-19 05:14 | | Aug-11-19 05:33 | | Aug-11-19 05:51 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <15.0 | 15.0 | <15.0 | 15.0 | 16.7 | 14.9 | <15.0 | 15.0 | | | | |
| Diesel Range Organics (DRO) | | 42.4 | 15.0 | <15.0 | 15.0 | 340 | 14.9 | <15.0 | 15.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <15.0 | 15.0 | <15.0 | 15.0 | 39.5 | 14.9 | <15.0 | 15.0 | | | | |
| Total TPH | | 42.4 | 15.0 | <15.0 | 15.0 | 396 | 14.9 | <15.0 | 15.0 | | | | |
| Total GRO-DRO | | 42.4 | 15.0 | <15.0 | 15.0 | 357 | 14.9 | <15.0 | 15.0 | | | | |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH03A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-001 | Date Collected: | 08.02.19 13.00 | Sample Depth: | 20 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 13.30 | Basis: | Wet Weight |
| Seq Number: | 3097977 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **16.4** | 5.00 | mg/kg | 08.08.19 14.09 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.09.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3098133 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.11.19 04.55 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **42.4** | 15.0 | mg/kg | 08.11.19 04.55 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.11.19 04.55 | U | 1 |
| **Total TPH** | PHC635 | **42.4** | 15.0 | mg/kg | 08.11.19 04.55 | | 1 |
| **Total GRO-DRO** | PHC628 | **42.4** | 15.0 | mg/kg | 08.11.19 04.55 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 94 | % | 70-135 | 08.11.19 04.55 | |
| o-Terphenyl | 84-15-1 | 95 | % | 70-135 | 08.11.19 04.55 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH03A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-001 | Date Collected: | 08.02.19 13.00 | Sample Depth: | 20 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.08.19 15.16 | Basis: | Wet Weight |
| Seq Number: | 3098269 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 08.10.19 11.42 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 08.10.19 11.42 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 70-130 | 08.10.19 11.42 | |
| 1,4-Difluorobenzene | 540-36-3 | 103 | % | 70-130 | 08.10.19 11.42 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH04A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-002 | Date Collected: | 08.05.19 09.55 | Sample Depth: | 20 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 13.30 | Basis: | Wet Weight |
| Seq Number: | 3097977 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1750** | 24.8 | mg/kg | 08.08.19 15.19 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.09.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3098133 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.11.19 05.14 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.11.19 05.14 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.11.19 05.14 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.11.19 05.14 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.11.19 05.14 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 86 | % | 70-135 | 08.11.19 05.14 | |
| o-Terphenyl | 84-15-1 | 88 | % | 70-135 | 08.11.19 05.14 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH04A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-002 | Date Collected: | 08.05.19 09.55 | Sample Depth: | 20 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.08.19 15.16 | Basis: | Wet Weight |
| Seq Number: | 3098269 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |
| Toluene | 108-88-3 | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00396 | 0.00396 | mg/kg | 08.10.19 12.03 | U | 1 |
| o-Xylene | 95-47-6 | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |
| Total BTEX | | <0.00198 | 0.00198 | mg/kg | 08.10.19 12.03 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 115 | % | 70-130 | 08.10.19 12.03 | |
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 70-130 | 08.10.19 12.03 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH05A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-003 | Date Collected: | 08.05.19 10.25 | Sample Depth: | 14 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 13.30 | Basis: | Wet Weight |
| Seq Number: | 3097977 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **813** | 5.00 | mg/kg | 08.08.19 15.25 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.09.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3098133 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **16.7** | 14.9 | mg/kg | 08.11.19 05.33 | | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **340** | 14.9 | mg/kg | 08.11.19 05.33 | | 1 |
| **Motor Oil Range Hydrocarbons (MRO)** | PHCG2835 | **39.5** | 14.9 | mg/kg | 08.11.19 05.33 | | 1 |
| **Total TPH** | PHC635 | **396** | 14.9 | mg/kg | 08.11.19 05.33 | | 1 |
| **Total GRO-DRO** | PHC628 | **357** | 14.9 | mg/kg | 08.11.19 05.33 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 93 | % | 70-135 | 08.11.19 05.33 | |
| o-Terphenyl | 84-15-1 | 99 | % | 70-135 | 08.11.19 05.33 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH05A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-003 | Date Collected: | 08.05.19 10.25 | Sample Depth: | 14 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.08.19 15.16 | Basis: | Wet Weight |
| Seq Number: | 3098269 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |
| Toluene | 108-88-3 | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 08.10.19 12.23 | U | 1 |
| o-Xylene | 95-47-6 | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |
| Total BTEX | | <0.00200 | 0.00200 | mg/kg | 08.10.19 12.23 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 93 | % | 70-130 | 08.10.19 12.23 | |
| 4-Bromofluorobenzene | 460-00-4 | 122 | % | 70-130 | 08.10.19 12.23 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH06A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-004 | Date Collected: | 08.05.19 12.00 | Sample Depth: | 16 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | CHE | | | % Moisture: | |
| Analyst: | CHE | Date Prep: | 08.08.19 13.30 | Basis: | Wet Weight |
| Seq Number: | 3097977 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **5430** | 50.2 | mg/kg | 08.08.19 15.31 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | TX1005P |
| Tech: | DVM | | | % Moisture: | |
| Analyst: | ARM | Date Prep: | 08.09.19 15.00 | Basis: | Wet Weight |
| Seq Number: | 3098133 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <15.0 | 15.0 | mg/kg | 08.11.19 05.51 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <15.0 | 15.0 | mg/kg | 08.11.19 05.51 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <15.0 | 15.0 | mg/kg | 08.11.19 05.51 | U | 1 |
| Total TPH | PHC635 | <15.0 | 15.0 | mg/kg | 08.11.19 05.51 | U | 1 |
| Total GRO-DRO | PHC628 | <15.0 | 15.0 | mg/kg | 08.11.19 05.51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 91 | % | 70-135 | 08.11.19 05.51 | |
| o-Terphenyl | 84-15-1 | 93 | % | 70-135 | 08.11.19 05.51 | |

# Certificate of Analytical Results 633408

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH06A** | Matrix: | Soil | Date Received: | 08.08.19 11.05 |
| Lab Sample Id: | 633408-004 | Date Collected: | 08.05.19 12.00 | Sample Depth: | 16 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | KTL | | | % Moisture: | |
| Analyst: | ALG | Date Prep: | 08.08.19 15.16 | Basis: | Wet Weight |
| Seq Number: | 3098269 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |
| Toluene | 108-88-3 | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00398 | 0.00398 | mg/kg | 08.10.19 12.43 | U | 1 |
| o-Xylene | 95-47-6 | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |
| Total BTEX | | <0.00199 | 0.00199 | mg/kg | 08.10.19 12.43 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 106 | % | 70-130 | 08.10.19 12.43 | |
| 4-Bromofluorobenzene | 460-00-4 | 116 | % | 70-130 | 08.10.19 12.43 | |

# Flagging Criteria

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

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

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

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

**F** RPD exceeded lab control limits.

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

**U** Analyte was not detected.

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

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

**K** Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

# QC Summary 633408

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683800-1-BLK LCS Sample Id: 7683800-1-BKS LCSD Sample Id: 7683800-1-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 | 251 | 100 | 249 | 100 | 90-110 | 1 | 20 | mg/kg | 08.08.19 13:56 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633408-001 MS Sample Id: 633408-001 S MSD Sample Id: 633408-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16.4 | 250 | 266 | 100 | 266 | 100 | 90-110 | 0 | 20 | mg/kg | 08.08.19 14:15 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097977 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633409-003 MS Sample Id: 633409-003 S MSD Sample Id: 633409-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15.3 | 248 | 258 | 98 | 258 | 98 | 90-110 | 0 | 20 | mg/kg | 08.08.19 15:44 | |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Solid Date Prep: 08.09.19
MB Sample Id: 7683942-1-BLK LCS Sample Id: 7683942-1-BKS LCSD Sample Id: 7683942-1-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) | <8.00 | 1000 | 1100 | 110 | 1130 | 113 | 70-135 | 3 | 20 | mg/kg | 08.11.19 02:06 | |
| Diesel Range Organics (DRO) | <8.13 | 1000 | 993 | 99 | 1030 | 103 | 70-135 | 4 | 20 | mg/kg | 08.11.19 02:06 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 90 | | 120 | | 124 | | 70-135 | % | 08.11.19 02:06 |
| o-Terphenyl | 91 | | 98 | | 107 | | 70-135 | % | 08.11.19 02:06 |

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 633408

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098133 Matrix: Soil Date Prep: 08.09.19
Parent Sample Id: 633251-001 MS Sample Id: 633251-001 S MSD Sample Id: 633251-001 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) | <7.98 | 997 | 1190 | 119 | 1150 | 115 | 70-135 | 3 | 20 | mg/kg | 08.11.19 03:02 | |
| Diesel Range Organics (DRO) | <8.10 | 997 | 1150 | 115 | 1170 | 117 | 70-135 | 2 | 20 | mg/kg | 08.11.19 03:02 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 127 | | 126 | | 70-135 | % | 08.11.19 03:02 |
| o-Terphenyl | 116 | | 118 | | 70-135 | % | 08.11.19 03:02 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Solid Date Prep: 08.08.19
MB Sample Id: 7683824-1-BLK LCS Sample Id: 7683824-1-BKS LCSD Sample Id: 7683824-1-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 | 0.0789 | 79 | 0.0848 | 85 | 70-130 | 7 | 35 | mg/kg | 08.10.19 08:19 | |
| Toluene | <0.00200 | 0.100 | 0.0776 | 78 | 0.0810 | 81 | 70-130 | 4 | 35 | mg/kg | 08.10.19 08:19 | |
| Ethylbenzene | <0.00200 | 0.100 | 0.0876 | 88 | 0.0911 | 91 | 70-130 | 4 | 35 | mg/kg | 08.10.19 08:19 | |
| m,p-Xylenes | <0.00400 | 0.200 | 0.176 | 88 | 0.183 | 92 | 70-130 | 4 | 35 | mg/kg | 08.10.19 08:19 | |
| o-Xylene | <0.00200 | 0.100 | 0.0859 | 86 | 0.0891 | 89 | 70-130 | 4 | 35 | mg/kg | 08.10.19 08:19 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 101 | | 100 | | 102 | | 70-130 | % | 08.10.19 08:19 |
| 4-Bromofluorobenzene | 103 | | 113 | | 121 | | 70-130 | % | 08.10.19 08:19 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3098269 Matrix: Soil Date Prep: 08.08.19
Parent Sample Id: 633407-021 MS Sample Id: 633407-021 S MSD Sample Id: 633407-021 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 | 0.0923 | 93 | 0.0917 | 92 | 70-130 | 1 | 35 | mg/kg | 08.10.19 09:00 | |
| Toluene | <0.00198 | 0.0992 | 0.0861 | 87 | 0.0866 | 87 | 70-130 | 1 | 35 | mg/kg | 08.10.19 09:00 | |
| Ethylbenzene | <0.00198 | 0.0992 | 0.0951 | 96 | 0.0932 | 93 | 70-130 | 2 | 35 | mg/kg | 08.10.19 09:00 | |
| m,p-Xylenes | <0.00397 | 0.198 | 0.193 | 97 | 0.188 | 94 | 70-130 | 3 | 35 | mg/kg | 08.10.19 09:00 | |
| o-Xylene | <0.00198 | 0.0992 | 0.0970 | 98 | 0.0931 | 93 | 70-130 | 4 | 35 | mg/kg | 08.10.19 09:00 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 104 | | 103 | | 70-130 | % | 08.10.19 09:00 |
| 4-Bromofluorobenzene | 127 | | 119 | | 70-130 | % | 08.10.19 09:00 |

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

# Chain of Custody

Work Order No: 633408

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

| | | | |
|---|---|---|---|
| Project Manager: | Dan Moir | Bill to: (if different) | Kyle Littrell |
| Company Name: | LT Environmental, Inc., Permian office | Company Name: | XTO Energy |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 Email: | llaumbach@ltenv.com, dmoir@ltenv.com | |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 12919150 | Routine ☐ | |
| P.O. Number: | Eddy County | Rush: 1 Day | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temperature (°C): | 0.7 / 0.5 | Temp Blank: Yes (No) | Wet Ice: (Yes) No | |
| Received Intact: | (Yes) No | Thermometer ID: VE | | |
| Cooler Custody Seals: | Yes No (N/A) | Correction Factor: -0.2 | | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| PH03A | S | 08/02/2019 | 13:00 | 20' | 1 | X | X | X |
| PH04A | S | 08/05/2019 | 9:35 | 20' | 1 | X | X | X |
| PH05A | S | 08/05/2019 | 10:25 | 14' | 1 | X | X | X |
| PH06A | S | 08/05/2019 | 12:00 | 16' | 1 | X | X | X |

**ANALYSIS REQUEST**

**Work Order Notes**

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

**Sample Comments**

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

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | Anna Byers | 8/6/19 @1600 | 2 Anna Byers | | 8/6/19 16:24 |
| 3 | Fed Ex | 8/7/19 410 | 4 | | 8/9/19 |
| 5 | | | 6 | | TUS |

Revised Date 051418 Rev. 2018.1

Final 1.000

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**After printing this label**:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

# XENCO Laboratories
## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 08/08/2019 11:05:00 AM

**Work Order #:** 633408

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

**Temperature Measuring device used : R8**

| Sample Receipt Checklist | Comments |
|---|---|
| #1 *Temperature of cooler(s)? | .5 |
| #2 *Shipping container in good condition? | **Yes** |
| #3 *Samples received on ice? | **Yes** |
| #4 *Custody Seals intact on shipping container/ cooler? | **N/A** |
| #5 Custody Seals intact on sample bottles? | **N/A** |
| #6*Custody Seals Signed and dated? | **N/A** |
| #7 *Chain of Custody present? | **Yes** |
| #8 Any missing/extra samples? | **No** |
| #9 Chain of Custody signed when relinquished/ received? | **Yes** |
| #10 Chain of Custody agrees with sample labels/matrix? | **Yes** |
| #11 Container label(s) legible and intact? | **Yes** |
| #12 Samples in proper container/ bottle? | **Yes** |
| #13 Samples properly preserved? | **Yes** |
| #14 Sample container(s) intact? | **Yes** |
| #15 Sufficient sample amount for indicated test(s)? | **Yes** |
| #16 All samples received within hold time? | **Yes** |
| #17 Subcontract of sample(s)? | **N/A** |
| #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:** Brianna Teel Date: 08/08/2019
Brianna Teel

**Checklist reviewed by:** Jessica Kramer Date: 08/08/2019
Jessica Kramer

# Analytical Report 634583

## for

## LT Environmental, Inc.

**Project Manager: Dan Moir**

**Pickett Draw Federal #001**

**012919150**

**22-AUG-19**

Collected By: Client


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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

22-AUG-19

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

Reference: XENCO Report No(s): **634583**
**Pickett Draw Federal #001**
Project Address: Eddy County

**Dan Moir**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 634583. 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. 634583 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

# Sample Cross Reference 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| PH10 | S | 08-15-19 10:05 | 7 ft | 634583-001 |
| PH10A | S | 08-15-19 15:25 | 22 ft | 634583-002 |
| PH11 | S | 08-19-19 10:25 | 2 ft | 634583-003 |
| PH11A | S | 08-19-19 10:30 | 4 ft | 634583-004 |
| PH12 | S | 08-19-19 11:00 | 4 ft | 634583-005 |
| PH12A | S | 08-19-19 11:05 | 6 ft | 634583-006 |
| PH13 | S | 08-19-19 11:30 | 2 ft | 634583-007 |
| PH13A | S | 08-19-19 11:35 | 4 ft | 634583-008 |
| PH14 | S | 08-19-19 11:45 | 2 ft | 634583-009 |
| PH14A | S | 08-19-19 11:50 | 4 ft | 634583-010 |
| PH15 | S | 08-19-19 13:10 | 2 ft | 634583-011 |
| PH15A | S | 08-19-19 13:15 | 4 ft | 634583-012 |
| SS05 | S | 08-19-19 14:20 | 0.5 ft | 634583-013 |
| SS06 | S | 08-19-19 14:35 | 0.5 ft | 634583-014 |

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3099039 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634583-011.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

# Certificate of Analysis Summary 634583

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 22-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634583-001 | | 634583-002 | | 634583-003 | | 634583-004 | | 634583-005 | | 634583-006 | |
| | ***Field Id:*** | PH10 | | PH10A | | PH11 | | PH11A | | PH12 | | PH12A | |
| | ***Depth:*** | 7- ft | | 22- ft | | 2- ft | | 4- ft | | 4- ft | | 6- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 10:05 | | Aug-15-19 15:25 | | Aug-19-19 10:25 | | Aug-19-19 10:30 | | Aug-19-19 11:00 | | Aug-19-19 11:05 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | |
| | ***Analyzed:*** | Aug-20-19 16:34 | | Aug-20-19 16:53 | | Aug-20-19 17:13 | | Aug-20-19 17:33 | | Aug-20-19 17:53 | | Aug-20-19 18:12 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| Toluene | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| Ethylbenzene | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| m,p-Xylenes | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00199 | 0.00199 |
| o-Xylene | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| Total Xylenes | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| Total BTEX | | <0.000996 | 0.000996 | <0.000996 | 0.000996 | <0.000998 | 0.000998 | <0.000996 | 0.000996 | <0.00100 | 0.00100 | <0.000996 | 0.000996 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | |
| | ***Analyzed:*** | Aug-20-19 18:46 | | Aug-20-19 19:14 | | Aug-20-19 19:21 | | Aug-20-19 19:27 | | Aug-20-19 19:34 | | Aug-20-19 19:54 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 1380 | 98.4 | 4240 | 100 | 355 | 9.84 | 265 | 10.0 | 1620 | 50.3 | 2000 | 50.0 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | |
| | ***Analyzed:*** | Aug-20-19 17:03 | | Aug-20-19 17:23 | | Aug-20-19 17:44 | | Aug-20-19 18:04 | | Aug-20-19 18:25 | | Aug-20-19 18:46 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Diesel Range Organics (DRO) | | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Total TPH | | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Total GRO-DRO | | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634583

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 22-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634583-007 | | 634583-008 | | 634583-009 | | 634583-010 | | 634583-011 | | 634583-012 | |
| | ***Field Id:*** | PH13 | | PH13A | | PH14 | | PH14A | | PH15 | | PH15A | |
| | ***Depth:*** | 2- ft | | 4- ft | | 2- ft | | 4- ft | | 2- ft | | 4- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-19-19 11:30 | | Aug-19-19 11:35 | | Aug-19-19 11:45 | | Aug-19-19 11:50 | | Aug-19-19 13:10 | | Aug-19-19 13:15 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | |
| | ***Analyzed:*** | Aug-20-19 18:32 | | Aug-20-19 18:53 | | Aug-20-19 19:13 | | Aug-20-19 19:33 | | Aug-20-19 20:32 | | Aug-20-19 20:52 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| Toluene | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| Ethylbenzene | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| m,p-Xylenes | | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00198 | 0.00198 | <0.00199 | 0.00199 |
| o-Xylene | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| Total Xylenes | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| Total BTEX | | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000990 | 0.000990 | <0.000994 | 0.000994 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | |
| | ***Analyzed:*** | Aug-20-19 20:00 | | Aug-20-19 20:07 | | Aug-20-19 20:13 | | Aug-20-19 20:20 | | Aug-20-19 20:27 | | Aug-20-19 20:46 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 1390 | 49.2 | 903 | 49.7 | 3340 | 98.2 | 4330 | 100 | 1250 | 50.0 | 1860 | 49.2 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | |
| | ***Analyzed:*** | Aug-20-19 19:07 | | Aug-20-19 19:28 | | Aug-20-19 19:49 | | Aug-20-19 20:10 | | Aug-20-19 20:51 | | Aug-20-19 21:12 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 | <25.0 | 25.0 |
| Diesel Range Organics (DRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 | <25.0 | 25.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 | <25.0 | 25.0 |
| Total TPH | | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 | <25.0 | 25.0 |
| Total GRO-DRO | | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 | <25.0 | 25.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634583

## LT Environmental, Inc., Arvada, CO

## Project Name: Pickett Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 22-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634583-013 | | 634583-014 | | | | | |
| | ***Field Id:*** | SS05 | | SS06 | | | | | |
| | ***Depth:*** | 0.5- ft | | 0.5- ft | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | Aug-19-19 14:20 | | Aug-19-19 14:35 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | | | | |
| | ***Analyzed:*** | Aug-20-19 21:12 | | Aug-20-19 21:32 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| Toluene | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| Ethylbenzene | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| m,p-Xylenes | | <0.00200 | 0.00200 | <0.00199 | 0.00199 | | | | |
| o-Xylene | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| Total Xylenes | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| Total BTEX | | <0.000998 | 0.000998 | <0.000994 | 0.000994 | | | | |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-20-19 16:08 | | Aug-20-19 16:08 | | | | | |
| | ***Analyzed:*** | Aug-20-19 20:53 | | Aug-20-19 21:12 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 34.4 | 10.0 | 384 | 10.0 | | | | |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | | | | |
| | ***Analyzed:*** | Aug-20-19 21:32 | | Aug-20-19 21:53 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <24.9 | 24.9 | <25.0 | 25.0 | | | | |
| Diesel Range Organics (DRO) | | <24.9 | 24.9 | <25.0 | 25.0 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <24.9 | 24.9 | <25.0 | 25.0 | | | | |
| Total TPH | | <24.9 | 24.9 | <25.0 | 25.0 | | | | |
| Total GRO-DRO | | <24.9 | 24.9 | <25.0 | 25.0 | | | | |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-001 | Date Collected: | 08.15.19 10.05 | Sample Depth: | 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1380** | 98.4 | mg/kg | 08.20.19 18.46 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 17.03 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 17.03 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 17.03 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 17.03 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 17.03 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.20.19 17.03 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-135 | 08.20.19 17.03 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-001 | Date Collected: | 08.15.19 10.05 | Sample Depth: | 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 16.34 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.34 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 95 | % | 80-120 | 08.20.19 16.34 | |
| 1,4-Difluorobenzene | 540-36-3 | 92 | % | 80-120 | 08.20.19 16.34 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH10A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-002 | Date Collected: | 08.15.19 15.25 | Sample Depth: | 22 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4240** | 100 | mg/kg | 08.20.19 19.14 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 17.23 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 17.23 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 17.23 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 17.23 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 17.23 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.20.19 17.23 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-135 | 08.20.19 17.23 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH10A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-002 | Date Collected: | 08.15.19 15.25 | Sample Depth: | 22 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 16.53 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 16.53 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 89 | % | 80-120 | 08.20.19 16.53 | |
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.20.19 16.53 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-003 | Date Collected: | 08.19.19 10.25 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **355** | 9.84 | mg/kg | 08.20.19 19.21 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 17.44 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 17.44 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 17.44 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 17.44 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 17.44 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.20.19 17.44 | |
| o-Terphenyl | 84-15-1 | 107 | % | 70-135 | 08.20.19 17.44 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-003 | Date Collected: | 08.19.19 10.25 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.20.19 17.13 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.20.19 17.13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 80-120 | 08.20.19 17.13 | |
| 4-Bromofluorobenzene | 460-00-4 | 90 | % | 80-120 | 08.20.19 17.13 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH11A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-004 | Date Collected: | 08.19.19 10.30 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **265** | 10.0 | mg/kg | 08.20.19 19.27 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 18.04 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 18.04 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 18.04 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 18.04 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 18.04 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 08.20.19 18.04 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.20.19 18.04 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH11A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-004 | Date Collected: | 08.19.19 10.30 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 17.33 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 17.33 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 93 | % | 80-120 | 08.20.19 17.33 | |
| 4-Bromofluorobenzene | 460-00-4 | 94 | % | 80-120 | 08.20.19 17.33 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-005 | Date Collected: | 08.19.19 11.00 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1620** | 50.3 | mg/kg | 08.20.19 19.34 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 18.25 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 18.25 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 18.25 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 18.25 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 18.25 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.20.19 18.25 | |
| o-Terphenyl | 84-15-1 | 109 | % | 70-135 | 08.20.19 18.25 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-005 | Date Collected: | 08.19.19 11.00 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.20.19 17.53 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.20.19 17.53 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 102 | % | 80-120 | 08.20.19 17.53 | |
| 1,4-Difluorobenzene | 540-36-3 | 98 | % | 80-120 | 08.20.19 17.53 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH12A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-006 | Date Collected: | 08.19.19 11.05 | Sample Depth: | 6 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2000** | 50.0 | mg/kg | 08.20.19 19.54 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.20.19 18.46 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.20.19 18.46 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.20.19 18.46 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.20.19 18.46 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.20.19 18.46 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 08.20.19 18.46 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-135 | 08.20.19 18.46 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH12A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-006 | Date Collected: | 08.19.19 11.05 | Sample Depth: | 6 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 18.12 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.12 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 92 | % | 80-120 | 08.20.19 18.12 | |
| 4-Bromofluorobenzene | 460-00-4 | 96 | % | 80-120 | 08.20.19 18.12 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-007 | Date Collected: | 08.19.19 11.30 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1390** | 49.2 | mg/kg | 08.20.19 20.00 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.20.19 19.07 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.20.19 19.07 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.20.19 19.07 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.20.19 19.07 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.20.19 19.07 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 107 | % | 70-135 | 08.20.19 19.07 | |
| o-Terphenyl | 84-15-1 | 106 | % | 70-135 | 08.20.19 19.07 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-007 | Date Collected: | 08.19.19 11.30 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 18.32 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.20.19 18.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 80-120 | 08.20.19 18.32 | |
| 4-Bromofluorobenzene | 460-00-4 | 96 | % | 80-120 | 08.20.19 18.32 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH13A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-008 | Date Collected: | 08.19.19 11.35 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **903** | 49.7 | mg/kg | 08.20.19 20.07 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 19.28 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 19.28 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 19.28 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 19.28 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 19.28 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 107 | % | 70-135 | 08.20.19 19.28 | |
| o-Terphenyl | 84-15-1 | 108 | % | 70-135 | 08.20.19 19.28 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH13A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-008 | Date Collected: | 08.19.19 11.35 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 18.53 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 18.53 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 91 | % | 80-120 | 08.20.19 18.53 | |
| 1,4-Difluorobenzene | 540-36-3 | 97 | % | 80-120 | 08.20.19 18.53 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-009 | Date Collected: | 08.19.19 11.45 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **3340** | 98.2 | mg/kg | 08.20.19 20.13 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 19.49 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 19.49 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 19.49 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 19.49 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 19.49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 08.20.19 19.49 | |
| o-Terphenyl | 84-15-1 | 109 | % | 70-135 | 08.20.19 19.49 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-009 | Date Collected: | 08.19.19 11.45 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 19.13 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.20.19 19.13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 98 | % | 80-120 | 08.20.19 19.13 | |
| 4-Bromofluorobenzene | 460-00-4 | 99 | % | 80-120 | 08.20.19 19.13 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH14A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-010 | Date Collected: | 08.19.19 11.50 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **4330** | 100 | mg/kg | 08.20.19 20.20 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 20.10 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 20.10 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 20.10 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 20.10 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 20.10 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 115 | % | 70-135 | 08.20.19 20.10 | |
| o-Terphenyl | 84-15-1 | 117 | % | 70-135 | 08.20.19 20.10 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH14A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-010 | Date Collected: | 08.19.19 11.50 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 19.33 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 19.33 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 90 | % | 80-120 | 08.20.19 19.33 | |
| 1,4-Difluorobenzene | 540-36-3 | 91 | % | 80-120 | 08.20.19 19.33 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-011 | Date Collected: | 08.19.19 13.10 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1250** | 50.0 | mg/kg | 08.20.19 20.27 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.20.19 20.51 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.20.19 20.51 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.20.19 20.51 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.20.19 20.51 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.20.19 20.51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.20.19 20.51 | |
| o-Terphenyl | 84-15-1 | 110 | % | 70-135 | 08.20.19 20.51 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-011 | Date Collected: | 08.19.19 13.10 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.20.19 20.32 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.20.19 20.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 126 | % | 80-120 | 08.20.19 20.32 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 87 | % | 80-120 | 08.20.19 20.32 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH15A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-012 | Date Collected: | 08.19.19 13.15 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1860** | 49.2 | mg/kg | 08.20.19 20.46 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.20.19 21.12 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.20.19 21.12 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.20.19 21.12 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.20.19 21.12 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.20.19 21.12 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 104 | % | 70-135 | 08.20.19 21.12 | |
| o-Terphenyl | 84-15-1 | 109 | % | 70-135 | 08.20.19 21.12 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **PH15A** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-012 | Date Collected: | 08.19.19 13.15 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 20.52 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.20.19 20.52 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 96 | % | 80-120 | 08.20.19 20.52 | |
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 80-120 | 08.20.19 20.52 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-013 | Date Collected: | 08.19.19 14.20 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **34.4** | 10.0 | mg/kg | 08.20.19 20.53 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 21.32 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 21.32 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 21.32 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 21.32 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 21.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 106 | % | 70-135 | 08.20.19 21.32 | |
| o-Terphenyl | 84-15-1 | 109 | % | 70-135 | 08.20.19 21.32 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-013 | Date Collected: | 08.19.19 14.20 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.20.19 21.12 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.20.19 21.12 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 92 | % | 80-120 | 08.20.19 21.12 | |
| 4-Bromofluorobenzene | 460-00-4 | 92 | % | 80-120 | 08.20.19 21.12 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-014 | Date Collected: | 08.19.19 14.35 | Sample Depth: | 0.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **384** | 10.0 | mg/kg | 08.20.19 21.12 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.20.19 21.53 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.20.19 21.53 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.20.19 21.53 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.20.19 21.53 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.20.19 21.53 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.20.19 21.53 | |
| o-Terphenyl | 84-15-1 | 113 | % | 70-135 | 08.20.19 21.53 | |

# Certificate of Analytical Results 634583

## LT Environmental, Inc., Arvada, CO

Pickett Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SS06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634583-014 | Date Collected: | 08.19.19 14.35 | Sample Depth: | 0.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 21.32 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.20.19 21.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 90 | % | 80-120 | 08.20.19 21.32 | |
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 80-120 | 08.20.19 21.32 | |

# Flagging Criteria

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

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

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

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

**F** RPD exceeded lab control limits.

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

**U** Analyte was not detected.

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

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

**K** Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**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 634583

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684654-1-BLK LCS Sample Id: 7684654-1-BKS LCSD Sample Id: 7684654-1-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 | 300 | 300 | 100 | 301 | 100 | 80-120 | 0 | 20 | mg/kg | 08.20.19 18:32 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-001 MS Sample Id: 634583-001 S MSD Sample Id: 634583-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1380 | 2470 | 4020 | 107 | 4040 | 107 | 80-120 | 0 | 20 | mg/kg | 08.20.19 18:52 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-011 MS Sample Id: 634583-011 S MSD Sample Id: 634583-011 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1250 | 1250 | 2670 | 114 | 2600 | 108 | 80-120 | 3 | 20 | mg/kg | 08.20.19 20:33 | |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684595-1-BLK LCS Sample Id: 7684595-1-BKS LCSD Sample Id: 7684595-1-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) | <9.90 | 1000 | 1000 | 100 | 974 | 98 | 70-135 | 3 | 35 | mg/kg | 08.20.19 11:28 | |
| Diesel Range Organics (DRO) | <9.90 | 1000 | 1030 | 103 | 992 | 100 | 70-135 | 4 | 35 | mg/kg | 08.20.19 11:28 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 130 | | 115 | | 115 | | 70-135 | % | 08.20.19 11:28 |
| o-Terphenyl | 128 | | 118 | | 116 | | 70-135 | % | 08.20.19 11:28 |

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 634583

## LT Environmental, Inc.

Pickett Draw Federal #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 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) | <9.91 | 1000 | 951 | 95 | 964 | 96 | 70-135 | 1 | 35 | mg/kg | 08.20.19 12:29 | |
| Diesel Range Organics (DRO) | <9.91 | 1000 | 974 | 97 | 988 | 99 | 70-135 | 1 | 35 | mg/kg | 08.20.19 12:29 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 114 | | 108 | | 70-135 | % | 08.20.19 12:29 |
| o-Terphenyl | 122 | | 112 | | 70-135 | % | 08.20.19 12:29 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684594-1-BLK LCS Sample Id: 7684594-1-BKS LCSD Sample Id: 7684594-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00101 | 0.101 | 0.0926 | 92 | 0.0944 | 95 | 70-130 | 2 | 35 | mg/kg | 08.20.19 10:59 | |
| Toluene | <0.00101 | 0.101 | 0.0906 | 90 | 0.0948 | 95 | 70-130 | 5 | 35 | mg/kg | 08.20.19 10:59 | |
| Ethylbenzene | <0.000503 | 0.101 | 0.0920 | 91 | 0.0956 | 96 | 71-129 | 4 | 35 | mg/kg | 08.20.19 10:59 | |
| m,p-Xylenes | <0.00101 | 0.201 | 0.189 | 94 | 0.193 | 97 | 70-135 | 2 | 35 | mg/kg | 08.20.19 10:59 | |
| o-Xylene | <0.000503 | 0.101 | 0.0951 | 94 | 0.0962 | 97 | 71-133 | 1 | 35 | mg/kg | 08.20.19 10:59 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 94 | | 103 | | 98 | | 80-120 | % | 08.20.19 10:59 |
| 4-Bromofluorobenzene | 93 | | 110 | | 103 | | 80-120 | % | 08.20.19 10:59 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.000990 | 0.0990 | 0.0979 | 99 | 0.0923 | 93 | 70-130 | 6 | 35 | mg/kg | 08.20.19 12:38 | |
| Toluene | <0.000990 | 0.0990 | 0.0932 | 94 | 0.0912 | 92 | 70-130 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| Ethylbenzene | <0.000990 | 0.0990 | 0.0956 | 97 | 0.0941 | 95 | 71-129 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| m,p-Xylenes | <0.000990 | 0.198 | 0.195 | 98 | 0.191 | 96 | 70-135 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| o-Xylene | <0.000990 | 0.0990 | 0.0968 | 98 | 0.0948 | 95 | 71-133 | 2 | 35 | mg/kg | 08.20.19 12:38 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 105 | | 106 | | 80-120 | % | 08.20.19 12:38 |
| 4-Bromofluorobenzene | 109 | | 110 | | 80-120 | % | 08.20.19 12:38 |

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

# Chain of Custody

Work Order No: 634583

XENCO LABORATORIES

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

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 12919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

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

**ANALYSIS REQUEST**

**Work Order Notes**

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) | Sample Comments |
|---|---|---|---|---|---|---|---|---|---|
| PH10 | S | 08/15/19 | 1005 | 7' | 1 | X | X | X | |
| PH10A | S | 08/15/19 | 1525 | 22' | | | | | |
| PH11 | S | 08/19/19 | 1025 | 2' | | | | | |
| PH11A | S | | 1030 | 4' | | | | | |
| PH12 | S | | 1100 | 4' | | | | | |
| PH12A | S | | 1105 | 6' | | | | | |
| PH13 | S | | 1130 | 2' | | | | | |
| PH13A | S | | 1135 | 4' | | | | | |
| PH14 | S | | 1145 | 2' | | | | | |
| PH14A | S | | 1150 | 4' | | | | | |

**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 | | 08/20/19 12:50 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# Chain of Custody

XENCO LABORATORIES

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

**Work Order No:** 634593

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 012919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Temperature (°C): | | Thermometer ID | | |
| Received Intact: | Yes No | | | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| PH1S | S | 08/14/2019 | 1310 | 2' | | X | X | X |
| PH1SA | S | | 1315 | 4' | | X | X | X |
| ~~PH~~ | | | | | | | | |
| SS05 | S | | 1420 | 0.5' | | X | X | X |
| SS06 | S | | 1435 | 0-5' | | X | X | X |

**ANALYSIS REQUEST**

**Work Order Notes**

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

**Sample Comments**

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

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



| Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|
| 1 | | 08/20/19 12:50 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 08/20/2019 12:50:00 PM

**Work Order #:** 634583

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

**Temperature Measuring device used : T-NM-007**

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

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

Analyst: PH Device/Lot#:

**Checklist completed by:** Elizabeth McClellan Date: 08/21/2019

**Checklist reviewed by:** Jessica Kramer Date: 08/21/2019

# Analytical Report 634606

## for

## LT Environmental, Inc.

**Project Manager: Dan Moir**

**Picket Draw Federal #001**

**012919150**

**26-AUG-19**

Collected By: Client


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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

26-AUG-19

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

Reference: XENCO Report No(s): **634606**
**Picket Draw Federal #001**
Project Address: Eddy County

**Dan Moir**:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 634606. 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. 634606 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

# Sample Cross Reference 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| FS01 | S | 08-15-19 10:40 | 1 ft | 634606-001 |
| FS02 | S | 08-15-19 10:45 | 1 ft | 634606-002 |
| FS03 | S | 08-15-19 10:50 | 1 ft | 634606-003 |
| FS04 | S | 08-15-19 11:00 | 1 ft | 634606-004 |
| FS05 | S | 08-15-19 11:05 | 1 ft | 634606-005 |
| FS06 | S | 08-15-19 11:10 | 1 ft | 634606-006 |
| FS07 | S | 08-15-19 11:20 | 2 ft | 634606-007 |
| FS08 | S | 08-15-19 11:25 | 2 ft | 634606-008 |
| FS09 | S | 08-15-19 11:30 | 2 ft | 634606-009 |
| FS10 | S | 08-15-19 11:35 | 2 ft | 634606-010 |
| FS11 | S | 08-15-19 11:45 | 2 ft | 634606-011 |
| FS12 | S | 08-15-19 11:55 | 3 ft | 634606-012 |
| SW01 | S | 08-15-19 12:05 | 0 - 1 ft | 634606-013 |
| SW02 | S | 08-15-19 12:10 | 0 - 3 ft | 634606-014 |
| FS13 | S | 08-15-19 12:20 | 3 ft | 634606-015 |
| SW03 | S | 08-15-19 12:30 | 0 - 7 ft | 634606-016 |
| SW04 | S | 08-15-19 13:00 | 0 - 4 ft | 634606-017 |
| FS14 | S | 08-15-19 13:20 | 3 ft | 634606-018 |
| FS15 | S | 08-15-19 14:15 | 4 ft | 634606-019 |
| FS16 | S | 08-15-19 14:25 | 4 ft | 634606-020 |
| FS17 | S | 08-15-19 14:35 | 4 ft | 634606-021 |
| FS18 | S | 08-15-19 14:45 | 4 ft | 634606-022 |
| FS19 | S | 08-15-19 14:55 | 4 ft | 634606-023 |
| FS20 | S | 08-15-19 15:10 | 4 ft | 634606-024 |
| FS21 | S | 08-15-19 15:20 | 4 ft | 634606-025 |
| FS22 | S | 08-19-19 12:00 | 5 ft | 634606-026 |
| FS23 | S | 08-19-19 12:10 | 5 ft | 634606-027 |
| FS24 | S | 08-19-19 12:15 | 5 ft | 634606-028 |
| FS25 | S | 08-19-19 13:10 | 5 ft | 634606-029 |
| FS26 | S | 08-19-19 13:15 | 6 ft | 634606-030 |
| FS27 | S | 08-19-19 13:25 | 7 ft | 634606-031 |
| SW05 | S | 08-19-19 13:30 | 0 - 5 ft | 634606-032 |
| SW06 | S | 08-19-19 13:45 | 0 - 5 ft | 634606-033 |
| FS28 | S | 08-19-19 13:55 | 4 ft | 634606-034 |
| FS29 | S | 08-19-19 14:00 | 4 ft | 634606-035 |
| FS30 | S | 08-19-19 14:10 | 4 ft | 634606-036 |
| SW07 | S | 08-19-19 14:20 | 0 - 7 ft | 634606-037 |
| SW08 | S | 08-19-19 14:30 | 0 - 4 ft | 634606-038 |
| FS31 | S | 08-19-19 14:40 | 2.5 ft | 634606-039 |
| SW09 | S | 08-19-19 14:50 | 0 - 4 ft | 634606-040 |
| SW10 | S | 08-19-19 15:00 | 0 - 4 ft | 634606-041 |
| SW11 | S | 08-19-19 15:10 | 0 - 4 ft | 634606-042 |
| SW12 | S | 08-19-19 15:20 | 0 - 2.5 ft | 634606-043 |

| | | | | |
|---|---|---|---|---|
| SW13 | S | 08-19-19 15:30 | 0 - 2.5 ft | 634606-044 |
| SW14 | S | 08-19-19 15:40 | 0 - 2.5 ft | 634606-045 |
| SW15 | S | 08-19-19 15:50 | 0 - 2.5 ft | 634606-046 |

**Sample receipt non conformances and comments:**

None

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3099039 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 634606-003.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099358 TPH by SW8015 Mod
Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered above QC limits Data confirmed by re-analysis. Samples affected are: 7684790-1-BKS.

Batch: LBA-3099361 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 Data confirmed by re-analysis. Samples affected are: 7684795-1-BKS,634606-006 S,634606-006 SD,634606-013.

Batch: LBA-3099404 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-024,634606-020.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099498 TPH by SW8015 Mod
Lab Sample ID 634606-025 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Diesel Range Organics (DRO), Analyst missed to spike MSD. Samples in the analytical batch are: 634606-025, -026, -027, -028, -029, -030.
The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO), Diesel Range Organics (DRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3099530 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-032.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099584 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-032,634606-044,634606-045,634606-046.
Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 634606-042,634606-044,634606-045,634606-046.

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-001 | | 634606-002 | | 634606-003 | | 634606-004 | | 634606-005 | | 634606-006 | |
| | ***Field Id:*** | FS01 | | FS02 | | FS03 | | FS04 | | FS05 | | FS06 | |
| | ***Depth:*** | 1- ft | | 1- ft | | 1- ft | | 1- ft | | 1- ft | | 1- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 10:40 | | Aug-15-19 10:45 | | Aug-15-19 10:50 | | Aug-15-19 11:00 | | Aug-15-19 11:05 | | Aug-15-19 11:10 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-20-19 21:52 | | Aug-20-19 22:12 | | Aug-20-19 22:32 | | Aug-20-19 22:51 | | Aug-20-19 23:11 | | Aug-21-19 12:01 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| Toluene | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| Ethylbenzene | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| m,p-Xylenes | | <0.00202 | 0.00202 | <0.00198 | 0.00198 | <0.00198 | 0.00198 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00199 | 0.00199 |
| o-Xylene | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| Total Xylenes | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| Total BTEX | | <0.00101 | 0.00101 | <0.000990 | 0.000990 | <0.000990 | 0.000990 | <0.000994 | 0.000994 | <0.000996 | 0.000996 | <0.000994 | 0.000994 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | | Aug-20-19 16:08 | |
| | ***Analyzed:*** | Aug-20-19 21:19 | | Aug-20-19 21:26 | | Aug-20-19 21:32 | | Aug-20-19 21:39 | | Aug-20-19 21:45 | | Aug-20-19 21:52 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 969 | 20.0 | 142 | 10.0 | 256 | 10.1 | 176 | 9.96 | 196 | 9.94 | 51.8 | 20.0 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-20-19 14:49 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-20-19 22:13 | | Aug-20-19 22:33 | | Aug-20-19 22:54 | | Aug-20-19 23:14 | | Aug-20-19 23:34 | | Aug-21-19 13:51 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <25.2 | 25.2 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Diesel Range Organics (DRO) | | <25.2 | 25.2 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | 29.2 | 24.9 | <25.0 | 25.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.2 | 25.2 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 | <25.0 | 25.0 |
| Total TPH | | <25.2 | 25.2 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | 29.2 | 24.9 | <25.0 | 25.0 |
| Total GRO-DRO | | <25.2 | 25.2 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | 29.2 | 24.9 | <25.0 | 25.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-007 | | 634606-008 | | 634606-009 | | 634606-010 | | 634606-011 | | 634606-012 | |
| | ***Field Id:*** | FS07 | | FS08 | | FS09 | | FS10 | | FS11 | | FS12 | |
| | ***Depth:*** | 2- ft | | 2- ft | | 2- ft | | 2- ft | | 2- ft | | 3- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 11:20 | | Aug-15-19 11:25 | | Aug-15-19 11:30 | | Aug-15-19 11:35 | | Aug-15-19 11:45 | | Aug-15-19 11:55 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 13:20 | | Aug-21-19 13:40 | | Aug-21-19 14:00 | | Aug-21-19 14:19 | | Aug-21-19 14:39 | | Aug-21-19 14:58 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| Toluene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| Ethylbenzene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | 0.00224 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| m,p-Xylenes | | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00200 | 0.00200 | <0.00202 | 0.00202 | <0.00199 | 0.00199 | <0.00198 | 0.00198 |
| o-Xylene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| Total Xylenes | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| Total BTEX | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000998 | 0.000998 | 0.00224 | 0.00101 | <0.000994 | 0.000994 | <0.000990 | 0.000990 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 20:24 | | Aug-21-19 20:43 | | Aug-21-19 20:50 | | Aug-21-19 20:56 | | Aug-21-19 21:03 | | Aug-21-19 21:23 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 195 | 9.94 | 189 | 10.0 | 237 | 10.1 | 74.0 | 10.0 | 350 | 9.98 | 274 | 10.0 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 15:00 | | Aug-21-19 15:20 | | Aug-21-19 15:40 | | Aug-21-19 16:01 | | Aug-21-19 16:21 | | Aug-21-19 16:42 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 |
| Diesel Range Organics (DRO) | | <24.9 | 24.9 | 83.7 | 25.1 | 27.7 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 |
| Motor Oil Range Hydrocarbons (MRO) | | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 |
| Total TPH | | <24.9 | 24.9 | 83.7 | 25.1 | 27.7 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 |
| Total GRO-DRO | | <24.9 | 24.9 | 83.7 | 25.1 | 27.7 | 25.1 | <25.1 | 25.1 | <24.9 | 24.9 | <24.9 | 24.9 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-013 | | 634606-014 | | 634606-015 | | 634606-016 | | 634606-017 | | 634606-018 | |
| | ***Field Id:*** | SW01 | | SW02 | | FS13 | | SW03 | | SW04 | | FS14 | |
| | ***Depth:*** | 0-1 ft | | 0-3 ft | | 3- ft | | 0-7 ft | | 0-4 ft | | 3- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 12:05 | | Aug-15-19 12:10 | | Aug-15-19 12:20 | | Aug-15-19 12:30 | | Aug-15-19 13:00 | | Aug-15-19 13:20 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-22-19 09:08 | | Aug-21-19 10:08 | | Aug-22-19 09:08 | |
| | ***Analyzed:*** | Aug-21-19 15:18 | | Aug-21-19 15:38 | | Aug-21-19 16:58 | | Aug-22-19 19:00 | | Aug-21-19 17:38 | | Aug-22-19 19:20 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| Toluene | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| Ethylbenzene | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| m,p-Xylenes | | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00199 | 0.00199 |
| o-Xylene | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| Total Xylenes | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| Total BTEX | | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.000996 | 0.000996 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 21:29 | | Aug-21-19 21:36 | | Aug-21-19 21:42 | | Aug-21-19 21:49 | | Aug-21-19 21:55 | | Aug-21-19 22:15 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 723 | 10.0 | 512 | 10.0 | 319 | 10.0 | 504 | 10.0 | 43.0 | 9.90 | 38.2 | 9.84 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 17:03 | | Aug-21-19 17:24 | | Aug-21-19 18:26 | | Aug-21-19 18:46 | | Aug-21-19 19:07 | | Aug-21-19 19:27 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <25.1 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 |
| Diesel Range Organics (DRO) | | 42.3 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | 50.1 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.1 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 |
| Total TPH | | 42.3 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | 50.1 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 |
| Total GRO-DRO | | 42.3 | 25.1 | <25.1 | 25.1 | <25.1 | 25.1 | 50.1 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-019 | | 634606-020 | | 634606-021 | | 634606-022 | | 634606-023 | | 634606-024 | |
| | ***Field Id:*** | FS15 | | FS16 | | FS17 | | FS18 | | FS19 | | FS20 | |
| | ***Depth:*** | 4- ft | | 4- ft | | 4- ft | | 4- ft | | 4- ft | | 4- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 14:15 | | Aug-15-19 14:25 | | Aug-15-19 14:35 | | Aug-15-19 14:45 | | Aug-15-19 14:55 | | Aug-15-19 15:10 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-22-19 09:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-22-19 09:08 | |
| | ***Analyzed:*** | Aug-21-19 18:17 | | Aug-22-19 19:40 | | Aug-21-19 18:57 | | Aug-21-19 19:17 | | Aug-21-19 19:37 | | Aug-22-19 20:00 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.00100 | 0.00100 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 |
| Toluene | | <0.00100 | 0.00100 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | <0.00100 | 0.00100 |
| Ethylbenzene | | <0.00100 | 0.00100 | 0.00243 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | 0.00148 | 0.00100 |
| m,p-Xylenes | | <0.00200 | 0.00200 | 0.0255 | 0.00199 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | <0.00200 | 0.00200 | 0.0104 | 0.00200 |
| o-Xylene | | <0.00100 | 0.00100 | 0.0104 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | 0.00791 | 0.00100 |
| Total Xylenes | | <0.00100 | 0.00100 | 0.0359 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | 0.0183 | 0.00100 |
| Total BTEX | | <0.00100 | 0.00100 | 0.0383 | 0.000994 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | <0.00100 | 0.00100 | 0.0198 | 0.00100 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 22:22 | | Aug-21-19 22:28 | | Aug-21-19 22:48 | | Aug-21-19 22:54 | | Aug-21-19 23:01 | | Aug-21-19 23:08 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 183 | 10.0 | 161 | 9.82 | 187 | 49.7 | 633 | 49.8 | 1150 | 99.8 | 1410 | 50.0 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 19:48 | | Aug-21-19 20:08 | | Aug-21-19 20:28 | | Aug-21-19 20:49 | | Aug-21-19 21:09 | | Aug-21-19 21:29 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <25.1 | 25.1 | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 |
| Diesel Range Organics (DRO) | | 152 | 25.1 | 586 | 25.0 | 57.6 | 24.9 | 59.0 | 24.9 | 42.2 | 25.1 | 190 | 25.1 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.1 | 25.1 | <25.0 | 25.0 | <24.9 | 24.9 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 |
| Total TPH | | 152 | 25.1 | 586 | 25.0 | 57.6 | 24.9 | 59.0 | 24.9 | 42.2 | 25.1 | 190 | 25.1 |
| Total GRO-DRO | | 152 | 25.1 | 586 | 25.0 | 57.6 | 24.9 | 59.0 | 24.9 | 42.2 | 25.1 | 190 | 25.1 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-025 | | 634606-026 | | 634606-027 | | 634606-028 | | 634606-029 | | 634606-030 | |
| | ***Field Id:*** | FS21 | | FS22 | | FS23 | | FS24 | | FS25 | | FS26 | |
| | ***Depth:*** | 4- ft | | 5- ft | | 5- ft | | 5- ft | | 5- ft | | 6- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-15-19 15:20 | | Aug-19-19 12:00 | | Aug-19-19 12:10 | | Aug-19-19 12:15 | | Aug-19-19 13:10 | | Aug-19-19 13:15 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | |
| | ***Analyzed:*** | Aug-22-19 11:10 | | Aug-22-19 11:29 | | Aug-22-19 11:49 | | Aug-22-19 12:09 | | Aug-22-19 12:29 | | Aug-22-19 12:49 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000996 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| Toluene | | <0.000996 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| Ethylbenzene | | 0.00117 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | 0.00341 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| m,p-Xylenes | | 0.00576 | 0.00199 | <0.00201 | 0.00201 | <0.00199 | 0.00199 | 0.0260 | 0.00200 | <0.00198 | 0.00198 | <0.00198 | 0.00198 |
| o-Xylene | | 0.00533 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | 0.0183 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| Total Xylenes | | 0.0111 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | 0.0443 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| Total BTEX | | 0.0123 | 0.000996 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | 0.0477 | 0.00100 | <0.000992 | 0.000992 | <0.000990 | 0.000990 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-21-19 23:14 | | Aug-22-19 23:42 | | Aug-22-19 09:48 | | Aug-22-19 10:07 | | Aug-22-19 10:13 | | Aug-22-19 10:19 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 767 | 49.8 | 3820 | 99.8 | 1450 | 99.4 | 2240 | 99.8 | 1050 | 49.7 | 127 | 9.98 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-22-19 09:30 | | Aug-22-19 09:30 | | Aug-22-19 09:30 | | Aug-22-19 09:30 | | Aug-22-19 09:30 | | Aug-22-19 09:30 | |
| | ***Analyzed:*** | Aug-22-19 12:06 | | Aug-22-19 13:09 | | Aug-22-19 13:29 | | Aug-22-19 13:49 | | Aug-22-19 14:09 | | Aug-22-19 14:29 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | 901 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <24.9 | 24.9 |
| Diesel Range Organics (DRO) | | 1170 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | 319 | 25.0 | <25.0 | 25.0 | 146 | 24.9 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | <24.9 | 24.9 |
| Total TPH | | 2070 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | 319 | 25.0 | <25.0 | 25.0 | 146 | 24.9 |
| Total GRO-DRO | | 2070 | 25.0 | <25.0 | 25.0 | <25.0 | 25.0 | 319 | 25.0 | <25.0 | 25.0 | 146 | 24.9 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-031 | | 634606-032 | | 634606-033 | | 634606-034 | | 634606-035 | | 634606-036 | |
| | ***Field Id:*** | FS27 | | SW05 | | SW06 | | FS28 | | FS29 | | FS30 | |
| | ***Depth:*** | 7- ft | | 0-5 ft | | 0-5 ft | | 4- ft | | 4- ft | | 4- ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-19-19 13:25 | | Aug-19-19 13:30 | | Aug-19-19 13:45 | | Aug-19-19 13:55 | | Aug-19-19 14:00 | | Aug-19-19 14:10 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-22-19 09:08 | | Aug-23-19 14:08 | | Aug-23-19 14:08 | | Aug-23-19 14:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | |
| | ***Analyzed:*** | Aug-22-19 13:08 | | Aug-24-19 16:13 | | Aug-24-19 15:33 | | Aug-24-19 15:53 | | Aug-22-19 15:48 | | Aug-22-19 16:08 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000996 | 0.000996 | <0.500 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| Toluene | | <0.000996 | 0.000996 | 2.08 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| Ethylbenzene | | <0.000996 | 0.000996 | 2.60 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| m,p-Xylenes | | <0.00199 | 0.00199 | 19.3 | 1.00 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00201 | 0.00201 |
| o-Xylene | | <0.000996 | 0.000996 | 9.06 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| Total Xylenes | | <0.000996 | 0.000996 | 28.4 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| Total BTEX | | <0.000996 | 0.000996 | 33.0 | 0.500 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.00101 | 0.00101 | <0.00100 | 0.00100 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-22-19 11:03 | | Aug-22-19 11:09 | | Aug-22-19 11:16 | | Aug-22-19 11:22 | | Aug-22-19 11:28 | | Aug-22-19 11:35 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 66.5 | 10.0 | 188 | 10.0 | 56.7 | 10.0 | 894 | 49.4 | 812 | 49.8 | 854 | 50.1 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | |
| | ***Analyzed:*** | Aug-23-19 13:30 | | Aug-23-19 13:50 | | Aug-23-19 14:10 | | Aug-23-19 14:30 | | Aug-23-19 14:50 | | Aug-23-19 15:10 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <24.9 | 24.9 | 615 | 25.0 | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 |
| Diesel Range Organics (DRO) | | <24.9 | 24.9 | 3810 | 25.0 | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 |
| Motor Oil Range Hydrocarbons (MRO) | | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 |
| Total TPH | | <24.9 | 24.9 | 4430 | 25.0 | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 |
| Total GRO-DRO | | <24.9 | 24.9 | 4430 | 25.0 | <24.9 | 24.9 | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-037 | | 634606-038 | | 634606-039 | | 634606-040 | | 634606-041 | | 634606-042 | |
| | ***Field Id:*** | SW07 | | SW08 | | FS31 | | SW09 | | SW10 | | SW11 | |
| | ***Depth:*** | 0-7 ft | | 0-4 ft | | 2.5- ft | | 0-4 ft | | 0-4 ft | | 0-4 ft | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | ***Sampled:*** | Aug-19-19 14:20 | | Aug-19-19 14:30 | | Aug-19-19 14:40 | | Aug-19-19 14:50 | | Aug-19-19 15:00 | | Aug-19-19 15:10 | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-22-19 09:08 | | Aug-23-19 14:08 | | Aug-23-19 14:08 | |
| | ***Analyzed:*** | Aug-22-19 16:48 | | Aug-22-19 17:07 | | Aug-22-19 18:21 | | Aug-22-19 18:41 | | Aug-24-19 13:34 | | Aug-24-19 13:54 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Benzene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| Toluene | | 0.00107 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| Ethylbenzene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| m,p-Xylenes | | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00199 | 0.00199 | <0.00199 | 0.00199 | <0.00200 | 0.00200 | <0.00198 | 0.00198 |
| o-Xylene | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| Total Xylenes | | <0.000998 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| Total BTEX | | 0.00107 | 0.000998 | <0.00101 | 0.00101 | <0.000994 | 0.000994 | <0.000994 | 0.000994 | <0.00100 | 0.00100 | <0.000992 | 0.000992 |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | |
| | ***Analyzed:*** | Aug-22-19 11:41 | | Aug-22-19 12:00 | | Aug-22-19 12:25 | | Aug-22-19 12:32 | | Aug-22-19 12:38 | | Aug-22-19 12:44 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 49.8 | 10.0 | 724 | 50.1 | 646 | 50.0 | 42.9 | 9.94 | 801 | 49.9 | 47.0 | 9.92 |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | |
| | ***Analyzed:*** | Aug-23-19 15:30 | | Aug-23-19 16:10 | | Aug-23-19 16:30 | | Aug-23-19 16:50 | | Aug-23-19 17:10 | | Aug-23-19 17:30 | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Gasoline Range Hydrocarbons (GRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 |
| Diesel Range Organics (DRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | 86.2 | 25.0 | <25.1 | 25.1 |
| Motor Oil Range Hydrocarbons (MRO) | | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 |
| Total TPH | | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | 86.2 | 25.0 | <25.1 | 25.1 |
| Total GRO-DRO | | <25.0 | 25.0 | <24.9 | 24.9 | <25.1 | 25.1 | <25.1 | 25.1 | 86.2 | 25.0 | <25.1 | 25.1 |





Jessica Kramer
Project Assistant

# Certificate of Analysis Summary 634606

## LT Environmental, Inc., Arvada, CO

## Project Name: Picket Draw Federal #001

**Project Id:** 012919150
**Contact:** Dan Moir
**Project Location:** Eddy County

**Date Received in Lab:** Tue Aug-20-19 12:50 pm
**Report Date:** 26-AUG-19
**Project Manager:** Jessica Kramer

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Lab Id:*** | 634606-043 | | 634606-044 | | 634606-045 | | 634606-046 | | | | | |
| | ***Field Id:*** | SW12 | | SW13 | | SW14 | | SW15 | | | | | |
| | ***Depth:*** | 0-2.5 ft | | 0-2.5 ft | | 0-2.5 ft | | 0-2.5 ft | | | | | |
| | ***Matrix:*** | SOIL | | SOIL | | SOIL | | SOIL | | | | | |
| | ***Sampled:*** | Aug-19-19 15:20 | | Aug-19-19 15:30 | | Aug-19-19 15:40 | | Aug-19-19 15:50 | | | | | |
| **BTEX by EPA 8021B** | ***Extracted:*** | Aug-23-19 14:08 | | Aug-23-19 14:08 | | Aug-23-19 14:08 | | Aug-23-19 14:08 | | | | | |
| | ***Analyzed:*** | Aug-24-19 14:13 | | Aug-24-19 14:33 | | Aug-24-19 14:54 | | Aug-24-19 15:14 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Benzene | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| Toluene | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| Ethylbenzene | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| m,p-Xylenes | | <0.00198 | 0.00198 | <0.00200 | 0.00200 | <0.00201 | 0.00201 | <0.00200 | 0.00200 | | | | |
| o-Xylene | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| Total Xylenes | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| Total BTEX | | <0.000990 | 0.000990 | <0.00100 | 0.00100 | <0.00100 | 0.00100 | <0.000998 | 0.000998 | | | | |
| **Chloride by EPA 300** | ***Extracted:*** | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | Aug-21-19 10:08 | | | | | |
| | ***Analyzed:*** | Aug-22-19 12:51 | | Aug-22-19 12:57 | | Aug-22-19 13:04 | | Aug-22-19 13:10 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 1760 | 49.7 | 684 | 49.7 | 1450 | 49.8 | 238 | 9.94 | | | | |
| **TPH by SW8015 Mod** | ***Extracted:*** | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | Aug-23-19 10:00 | | | | | |
| | ***Analyzed:*** | Aug-23-19 17:50 | | Aug-23-19 18:11 | | Aug-23-19 18:31 | | Aug-23-19 18:51 | | | | | |
| | ***Units/RL:*** | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Gasoline Range Hydrocarbons (GRO) | | <24.9 | 24.9 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 | | | | |
| Diesel Range Organics (DRO) | | 140 | 24.9 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 | | | | |
| Motor Oil Range Hydrocarbons (MRO) | | <24.9 | 24.9 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 | | | | |
| Total TPH | | 140 | 24.9 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 | | | | |
| Total GRO-DRO | | 140 | 24.9 | <25.1 | 25.1 | <25.0 | 25.0 | <25.1 | 25.1 | | | | |





Jessica Kramer
Project Assistant

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS01** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-001 | Date Collected: | 08.15.19 10.40 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **969** | 20.0 | mg/kg | 08.20.19 21.19 | | 2 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.2 | 25.2 | mg/kg | 08.20.19 22.13 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.2 | 25.2 | mg/kg | 08.20.19 22.13 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.2 | 25.2 | mg/kg | 08.20.19 22.13 | U | 1 |
| Total TPH | PHC635 | <25.2 | 25.2 | mg/kg | 08.20.19 22.13 | U | 1 |
| Total GRO-DRO | PHC628 | <25.2 | 25.2 | mg/kg | 08.20.19 22.13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 106 | % | 70-135 | 08.20.19 22.13 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.20.19 22.13 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS01** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-001 | Date Collected: | 08.15.19 10.40 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00202 | 0.00202 | mg/kg | 08.20.19 21.52 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |
| Total BTEX | | <0.00101 | 0.00101 | mg/kg | 08.20.19 21.52 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 95 | % | 80-120 | 08.20.19 21.52 | |
| 4-Bromofluorobenzene | 460-00-4 | 95 | % | 80-120 | 08.20.19 21.52 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS02** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-002 | Date Collected: | 08.15.19 10.45 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **142** | 10.0 | mg/kg | 08.20.19 21.26 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.20.19 22.33 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.20.19 22.33 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.20.19 22.33 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.20.19 22.33 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.20.19 22.33 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 112 | % | 70-135 | 08.20.19 22.33 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.20.19 22.33 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS02** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-002 | Date Collected: | 08.15.19 10.45 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.20.19 22.12 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.12 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 95 | % | 80-120 | 08.20.19 22.12 | |
| 1,4-Difluorobenzene | 540-36-3 | 96 | % | 80-120 | 08.20.19 22.12 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS03** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-003 | Date Collected: | 08.15.19 10.50 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **256** | 10.1 | mg/kg | 08.20.19 21.32 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.20.19 22.54 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.20.19 22.54 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.20.19 22.54 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.20.19 22.54 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.20.19 22.54 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 116 | % | 70-135 | 08.20.19 22.54 | |
| o-Terphenyl | 84-15-1 | 123 | % | 70-135 | 08.20.19 22.54 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS03** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-003 | Date Collected: | 08.15.19 10.50 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.20.19 22.32 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.20.19 22.32 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 125 | % | 80-120 | 08.20.19 22.32 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 101 | % | 80-120 | 08.20.19 22.32 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS04** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-004 | Date Collected: | 08.15.19 11.00 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **176** | 9.96 | mg/kg | 08.20.19 21.39 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 23.14 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.20.19 23.14 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 23.14 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.20.19 23.14 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.20.19 23.14 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 118 | % | 70-135 | 08.20.19 23.14 | |
| o-Terphenyl | 84-15-1 | 119 | % | 70-135 | 08.20.19 23.14 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS04** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-004 | Date Collected: | 08.15.19 11.00 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 22.51 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.20.19 22.51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 106 | % | 80-120 | 08.20.19 22.51 | |
| 1,4-Difluorobenzene | 540-36-3 | 100 | % | 80-120 | 08.20.19 22.51 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-005 | Date Collected: | 08.15.19 11.05 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **196** | 9.94 | mg/kg | 08.20.19 21.45 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099052 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.20.19 23.34 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **29.2** | 24.9 | mg/kg | 08.20.19 23.34 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.20.19 23.34 | U | 1 |
| **Total TPH** | PHC635 | **29.2** | 24.9 | mg/kg | 08.20.19 23.34 | | 1 |
| **Total GRO-DRO** | PHC628 | **29.2** | 24.9 | mg/kg | 08.20.19 23.34 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 111 | % | 70-135 | 08.20.19 23.34 | |
| o-Terphenyl | 84-15-1 | 115 | % | 70-135 | 08.20.19 23.34 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-005 | Date Collected: | 08.15.19 11.05 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.20.19 14.49 | Basis: | Wet Weight |
| Seq Number: | 3099039 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.20.19 23.11 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.20.19 23.11 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 101 | % | 80-120 | 08.20.19 23.11 | |
| 4-Bromofluorobenzene | 460-00-4 | 106 | % | 80-120 | 08.20.19 23.11 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-006 | Date Collected: | 08.15.19 11.10 | Sample Depth: | 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.20.19 16.08 | Basis: | Wet Weight |
| Seq Number: | 3099290 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **51.8** | 20.0 | mg/kg | 08.20.19 21.52 | | 2 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.21.19 13.51 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.21.19 13.51 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.21.19 13.51 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.21.19 13.51 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.21.19 13.51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 117 | % | 70-135 | 08.21.19 13.51 | |
| o-Terphenyl | 84-15-1 | 117 | % | 70-135 | 08.21.19 13.51 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-006 | Date Collected: | 08.15.19 11.10 | Sample Depth: | 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.21.19 12.01 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.21.19 12.01 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 111 | % | 80-120 | 08.21.19 12.01 | |
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.21.19 12.01 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS07** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-007 | Date Collected: | 08.15.19 11.20 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **195** | 9.94 | mg/kg | 08.21.19 20.24 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.21.19 15.00 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.21.19 15.00 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.21.19 15.00 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.21.19 15.00 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.21.19 15.00 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.21.19 15.00 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.21.19 15.00 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS07** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-007 | Date Collected: | 08.15.19 11.20 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 13.20 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.21.19 13.20 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 103 | % | 80-120 | 08.21.19 13.20 | |
| 4-Bromofluorobenzene | 460-00-4 | 116 | % | 80-120 | 08.21.19 13.20 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS08** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-008 | Date Collected: | 08.15.19 11.25 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **189** | 10.0 | mg/kg | 08.21.19 20.43 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 15.20 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **83.7** | 25.1 | mg/kg | 08.21.19 15.20 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 15.20 | U | 1 |
| **Total TPH** | PHC635 | **83.7** | 25.1 | mg/kg | 08.21.19 15.20 | | 1 |
| **Total GRO-DRO** | PHC628 | **83.7** | 25.1 | mg/kg | 08.21.19 15.20 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 111 | % | 70-135 | 08.21.19 15.20 | |
| o-Terphenyl | 84-15-1 | 115 | % | 70-135 | 08.21.19 15.20 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS08** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-008 | Date Collected: | 08.15.19 11.25 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00202 | 0.00202 | mg/kg | 08.21.19 13.40 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |
| Total BTEX | | <0.00101 | 0.00101 | mg/kg | 08.21.19 13.40 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 109 | % | 80-120 | 08.21.19 13.40 | |
| 1,4-Difluorobenzene | 540-36-3 | 101 | % | 80-120 | 08.21.19 13.40 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS09** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-009 | Date Collected: | 08.15.19 11.30 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **237** | 10.1 | mg/kg | 08.21.19 20.50 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 15.40 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **27.7** | 25.1 | mg/kg | 08.21.19 15.40 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 15.40 | U | 1 |
| **Total TPH** | PHC635 | **27.7** | 25.1 | mg/kg | 08.21.19 15.40 | | 1 |
| **Total GRO-DRO** | PHC628 | **27.7** | 25.1 | mg/kg | 08.21.19 15.40 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 117 | % | 70-135 | 08.21.19 15.40 | |
| o-Terphenyl | 84-15-1 | 120 | % | 70-135 | 08.21.19 15.40 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS09** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-009 | Date Collected: | 08.15.19 11.30 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 14.00 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.21.19 14.00 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 97 | % | 80-120 | 08.21.19 14.00 | |
| 4-Bromofluorobenzene | 460-00-4 | 103 | % | 80-120 | 08.21.19 14.00 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-010 | Date Collected: | 08.15.19 11.35 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **74.0** | 10.0 | mg/kg | 08.21.19 20.56 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 16.01 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.21.19 16.01 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 16.01 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.21.19 16.01 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.21.19 16.01 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 116 | % | 70-135 | 08.21.19 16.01 | |
| o-Terphenyl | 84-15-1 | 113 | % | 70-135 | 08.21.19 16.01 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-010 | Date Collected: | 08.15.19 11.35 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.21.19 14.19 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.21.19 14.19 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00224** | 0.00101 | mg/kg | 08.21.19 14.19 | | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00202 | 0.00202 | mg/kg | 08.21.19 14.19 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.21.19 14.19 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.21.19 14.19 | U | 1 |
| **Total BTEX** | | **0.00224** | 0.00101 | mg/kg | 08.21.19 14.19 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.21.19 14.19 | |
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.21.19 14.19 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-011 | Date Collected: | 08.15.19 11.45 | Sample Depth: | 2 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **350** | 9.98 | mg/kg | 08.21.19 21.03 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.21.19 16.21 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.21.19 16.21 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.21.19 16.21 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.21.19 16.21 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.21.19 16.21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.21.19 16.21 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.21.19 16.21 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-011 | Date Collected: | 08.15.19 11.45 | Sample Depth: | 2 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.21.19 14.39 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.21.19 14.39 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 101 | % | 80-120 | 08.21.19 14.39 | |
| 4-Bromofluorobenzene | 460-00-4 | 110 | % | 80-120 | 08.21.19 14.39 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-012 | Date Collected: | 08.15.19 11.55 | Sample Depth: | 3 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **274** | 10.0 | mg/kg | 08.21.19 21.23 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.21.19 16.42 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.21.19 16.42 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.21.19 16.42 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.21.19 16.42 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.21.19 16.42 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 119 | % | 70-135 | 08.21.19 16.42 | |
| o-Terphenyl | 84-15-1 | 117 | % | 70-135 | 08.21.19 16.42 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-012 | Date Collected: | 08.15.19 11.55 | Sample Depth: | 3 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.21.19 14.58 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.21.19 14.58 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 80-120 | 08.21.19 14.58 | |
| 4-Bromofluorobenzene | 460-00-4 | 117 | % | 80-120 | 08.21.19 14.58 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW01** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-013 | Date Collected: | 08.15.19 12.05 | Sample Depth: | 0 - 1 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **723** | 10.0 | mg/kg | 08.21.19 21.29 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 17.03 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **42.3** | 25.1 | mg/kg | 08.21.19 17.03 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 17.03 | U | 1 |
| **Total TPH** | PHC635 | **42.3** | 25.1 | mg/kg | 08.21.19 17.03 | | 1 |
| **Total GRO-DRO** | PHC628 | **42.3** | 25.1 | mg/kg | 08.21.19 17.03 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.21.19 17.03 | |
| o-Terphenyl | 84-15-1 | 112 | % | 70-135 | 08.21.19 17.03 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW01** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-013 | Date Collected: | 08.15.19 12.05 | Sample Depth: | 0 - 1 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 15.18 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.21.19 15.18 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 94 | % | 80-120 | 08.21.19 15.18 | |
| 4-Bromofluorobenzene | 460-00-4 | 124 | % | 80-120 | 08.21.19 15.18 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW02** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-014 | Date Collected: | 08.15.19 12.10 | Sample Depth: | 0 - 3 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **512** | 10.0 | mg/kg | 08.21.19 21.36 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 17.24 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.21.19 17.24 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 17.24 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.21.19 17.24 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.21.19 17.24 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 111 | % | 70-135 | 08.21.19 17.24 | |
| o-Terphenyl | 84-15-1 | 110 | % | 70-135 | 08.21.19 17.24 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW02** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-014 | Date Collected: | 08.15.19 12.10 | Sample Depth: | 0 - 3 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 15.38 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.21.19 15.38 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 111 | % | 80-120 | 08.21.19 15.38 | |
| 1,4-Difluorobenzene | 540-36-3 | 96 | % | 80-120 | 08.21.19 15.38 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-015 | Date Collected: | 08.15.19 12.20 | Sample Depth: | 3 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **319** | 10.0 | mg/kg | 08.21.19 21.42 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 18.26 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.21.19 18.26 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 18.26 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.21.19 18.26 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.21.19 18.26 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 08.21.19 18.26 | |
| o-Terphenyl | 84-15-1 | 111 | % | 70-135 | 08.21.19 18.26 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-015 | Date Collected: | 08.15.19 12.20 | Sample Depth: | 3 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 16.58 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.21.19 16.58 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 85 | % | 80-120 | 08.21.19 16.58 | |
| 4-Bromofluorobenzene | 460-00-4 | 118 | % | 80-120 | 08.21.19 16.58 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW03** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-016 | Date Collected: | 08.15.19 12.30 | Sample Depth: | 0 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **504** | 10.0 | mg/kg | 08.21.19 21.49 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.21.19 18.46 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **50.1** | 25.0 | mg/kg | 08.21.19 18.46 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.21.19 18.46 | U | 1 |
| **Total TPH** | PHC635 | **50.1** | 25.0 | mg/kg | 08.21.19 18.46 | | 1 |
| **Total GRO-DRO** | PHC628 | **50.1** | 25.0 | mg/kg | 08.21.19 18.46 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.21.19 18.46 | |
| o-Terphenyl | 84-15-1 | 114 | % | 70-135 | 08.21.19 18.46 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW03** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-016 | Date Collected: | 08.15.19 12.30 | Sample Depth: | 0 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.22.19 19.00 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.22.19 19.00 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 115 | % | 80-120 | 08.22.19 19.00 | |
| 1,4-Difluorobenzene | 540-36-3 | 107 | % | 80-120 | 08.22.19 19.00 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW04** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-017 | Date Collected: | 08.15.19 13.00 | Sample Depth: | 0 - 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **43.0** | 9.90 | mg/kg | 08.21.19 21.55 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.21.19 19.07 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.21.19 19.07 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.21.19 19.07 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.21.19 19.07 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.21.19 19.07 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 105 | % | 70-135 | 08.21.19 19.07 | |
| o-Terphenyl | 84-15-1 | 100 | % | 70-135 | 08.21.19 19.07 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW04** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-017 | Date Collected: | 08.15.19 13.00 | Sample Depth: | 0 - 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 17.38 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.21.19 17.38 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 115 | % | 80-120 | 08.21.19 17.38 | |
| 1,4-Difluorobenzene | 540-36-3 | 103 | % | 80-120 | 08.21.19 17.38 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-018 | Date Collected: | 08.15.19 13.20 | Sample Depth: | 3 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **38.2** | 9.84 | mg/kg | 08.21.19 22.15 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.21.19 19.27 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.21.19 19.27 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.21.19 19.27 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.21.19 19.27 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.21.19 19.27 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 109 | % | 70-135 | 08.21.19 19.27 | |
| o-Terphenyl | 84-15-1 | 101 | % | 70-135 | 08.21.19 19.27 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-018 | Date Collected: | 08.15.19 13.20 | Sample Depth: | 3 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.22.19 19.20 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.22.19 19.20 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 80-120 | 08.22.19 19.20 | |
| 1,4-Difluorobenzene | 540-36-3 | 107 | % | 80-120 | 08.22.19 19.20 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-019 | Date Collected: | 08.15.19 14.15 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **183** | 10.0 | mg/kg | 08.21.19 22.22 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 19.48 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **152** | 25.1 | mg/kg | 08.21.19 19.48 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 19.48 | U | 1 |
| **Total TPH** | PHC635 | **152** | 25.1 | mg/kg | 08.21.19 19.48 | | 1 |
| **Total GRO-DRO** | PHC628 | **152** | 25.1 | mg/kg | 08.21.19 19.48 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 106 | % | 70-135 | 08.21.19 19.48 | |
| o-Terphenyl | 84-15-1 | 116 | % | 70-135 | 08.21.19 19.48 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-019 | Date Collected: | 08.15.19 14.15 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 18.17 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.17 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 104 | % | 80-120 | 08.21.19 18.17 | |
| 1,4-Difluorobenzene | 540-36-3 | 96 | % | 80-120 | 08.21.19 18.17 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS16** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-020 | Date Collected: | 08.15.19 14.25 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **161** | 9.82 | mg/kg | 08.21.19 22.28 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.21.19 20.08 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **586** | 25.0 | mg/kg | 08.21.19 20.08 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.21.19 20.08 | U | 1 |
| **Total TPH** | PHC635 | **586** | 25.0 | mg/kg | 08.21.19 20.08 | | 1 |
| **Total GRO-DRO** | PHC628 | **586** | 25.0 | mg/kg | 08.21.19 20.08 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 112 | % | 70-135 | 08.21.19 20.08 | |
| o-Terphenyl | 84-15-1 | 128 | % | 70-135 | 08.21.19 20.08 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS16** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-020 | Date Collected: | 08.15.19 14.25 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.22.19 19.40 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.22.19 19.40 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00243** | 0.000994 | mg/kg | 08.22.19 19.40 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.0255** | 0.00199 | mg/kg | 08.22.19 19.40 | | 1 |
| **o-Xylene** | 95-47-6 | **0.0104** | 0.000994 | mg/kg | 08.22.19 19.40 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0359** | 0.000994 | mg/kg | 08.22.19 19.40 | | 1 |
| **Total BTEX** | | **0.0383** | 0.000994 | mg/kg | 08.22.19 19.40 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 155 | % | 80-120 | 08.22.19 19.40 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 113 | % | 80-120 | 08.22.19 19.40 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS17** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-021 | Date Collected: | 08.15.19 14.35 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **187** | 49.7 | mg/kg | 08.21.19 22.48 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.21.19 20.28 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **57.6** | 24.9 | mg/kg | 08.21.19 20.28 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.21.19 20.28 | U | 1 |
| **Total TPH** | PHC635 | **57.6** | 24.9 | mg/kg | 08.21.19 20.28 | | 1 |
| **Total GRO-DRO** | PHC628 | **57.6** | 24.9 | mg/kg | 08.21.19 20.28 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 107 | % | 70-135 | 08.21.19 20.28 | |
| o-Terphenyl | 84-15-1 | 112 | % | 70-135 | 08.21.19 20.28 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS17** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-021 | Date Collected: | 08.15.19 14.35 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 18.57 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.21.19 18.57 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.21.19 18.57 | |
| 1,4-Difluorobenzene | 540-36-3 | 109 | % | 80-120 | 08.21.19 18.57 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS18** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-022 | Date Collected: | 08.15.19 14.45 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **633** | 49.8 | mg/kg | 08.21.19 22.54 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.21.19 20.49 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **59.0** | 24.9 | mg/kg | 08.21.19 20.49 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.21.19 20.49 | U | 1 |
| **Total TPH** | PHC635 | **59.0** | 24.9 | mg/kg | 08.21.19 20.49 | | 1 |
| **Total GRO-DRO** | PHC628 | **59.0** | 24.9 | mg/kg | 08.21.19 20.49 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 120 | % | 70-135 | 08.21.19 20.49 | |
| o-Terphenyl | 84-15-1 | 125 | % | 70-135 | 08.21.19 20.49 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS18** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-022 | Date Collected: | 08.15.19 14.45 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 19.17 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.21.19 19.17 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 80-120 | 08.21.19 19.17 | |
| 4-Bromofluorobenzene | 460-00-4 | 110 | % | 80-120 | 08.21.19 19.17 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS19** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-023 | Date Collected: | 08.15.19 14.55 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1150** | 99.8 | mg/kg | 08.21.19 23.01 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 21.09 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **42.2** | 25.1 | mg/kg | 08.21.19 21.09 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 21.09 | U | 1 |
| **Total TPH** | PHC635 | **42.2** | 25.1 | mg/kg | 08.21.19 21.09 | | 1 |
| **Total GRO-DRO** | PHC628 | **42.2** | 25.1 | mg/kg | 08.21.19 21.09 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 105 | % | 70-135 | 08.21.19 21.09 | |
| o-Terphenyl | 84-15-1 | 102 | % | 70-135 | 08.21.19 21.09 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS19** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-023 | Date Collected: | 08.15.19 14.55 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099361 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.21.19 19.37 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.21.19 19.37 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 99 | % | 80-120 | 08.21.19 19.37 | |
| 4-Bromofluorobenzene | 460-00-4 | 108 | % | 80-120 | 08.21.19 19.37 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS20** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-024 | Date Collected: | 08.15.19 15.10 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1410** | 50.0 | mg/kg | 08.21.19 23.08 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099358 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.21.19 21.29 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **190** | 25.1 | mg/kg | 08.21.19 21.29 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.21.19 21.29 | U | 1 |
| **Total TPH** | PHC635 | **190** | 25.1 | mg/kg | 08.21.19 21.29 | | 1 |
| **Total GRO-DRO** | PHC628 | **190** | 25.1 | mg/kg | 08.21.19 21.29 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 105 | % | 70-135 | 08.21.19 21.29 | |
| o-Terphenyl | 84-15-1 | 107 | % | 70-135 | 08.21.19 21.29 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS20** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-024 | Date Collected: | 08.15.19 15.10 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.22.19 20.00 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.22.19 20.00 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00148** | 0.00100 | mg/kg | 08.22.19 20.00 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.0104** | 0.00200 | mg/kg | 08.22.19 20.00 | | 1 |
| **o-Xylene** | 95-47-6 | **0.00791** | 0.00100 | mg/kg | 08.22.19 20.00 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0183** | 0.00100 | mg/kg | 08.22.19 20.00 | | 1 |
| **Total BTEX** | | **0.0198** | 0.00100 | mg/kg | 08.22.19 20.00 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 129 | % | 80-120 | 08.22.19 20.00 | ** |
| 1,4-Difluorobenzene | 540-36-3 | 116 | % | 80-120 | 08.22.19 20.00 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS21** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-025 | Date Collected: | 08.15.19 15.20 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **767** | 49.8 | mg/kg | 08.21.19 23.14 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **901** | 25.0 | mg/kg | 08.22.19 12.06 | | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **1170** | 25.0 | mg/kg | 08.22.19 12.06 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.22.19 12.06 | U | 1 |
| **Total TPH** | PHC635 | **2070** | 25.0 | mg/kg | 08.22.19 12.06 | | 1 |
| **Total GRO-DRO** | PHC628 | **2070** | 25.0 | mg/kg | 08.22.19 12.06 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 116 | % | 70-135 | 08.22.19 12.06 | |
| o-Terphenyl | 84-15-1 | 116 | % | 70-135 | 08.22.19 12.06 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS21** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-025 | Date Collected: | 08.15.19 15.20 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.22.19 11.10 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.22.19 11.10 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00117** | 0.000996 | mg/kg | 08.22.19 11.10 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.00576** | 0.00199 | mg/kg | 08.22.19 11.10 | | 1 |
| **o-Xylene** | 95-47-6 | **0.00533** | 0.000996 | mg/kg | 08.22.19 11.10 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0111** | 0.000996 | mg/kg | 08.22.19 11.10 | | 1 |
| **Total BTEX** | | **0.0123** | 0.000996 | mg/kg | 08.22.19 11.10 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 118 | % | 80-120 | 08.22.19 11.10 | |
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 80-120 | 08.22.19 11.10 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS22** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-026 | Date Collected: | 08.19.19 12.00 | Sample Depth: | 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099263 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **3820** | 99.8 | mg/kg | 08.22.19 23.42 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.22.19 13.09 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.22.19 13.09 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.22.19 13.09 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.22.19 13.09 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.22.19 13.09 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 98 | % | 70-135 | 08.22.19 13.09 | |
| o-Terphenyl | 84-15-1 | 89 | % | 70-135 | 08.22.19 13.09 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS22** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-026 | Date Collected: | 08.19.19 12.00 | Sample Depth: | 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.22.19 11.29 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |
| Total BTEX | | <0.00101 | 0.00101 | mg/kg | 08.22.19 11.29 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 112 | % | 80-120 | 08.22.19 11.29 | |
| 1,4-Difluorobenzene | 540-36-3 | 99 | % | 80-120 | 08.22.19 11.29 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS23** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-027 | Date Collected: | 08.19.19 12.10 | Sample Depth: | 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1450** | 99.4 | mg/kg | 08.22.19 09.48 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.22.19 13.29 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.22.19 13.29 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.22.19 13.29 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.22.19 13.29 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.22.19 13.29 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 98 | % | 70-135 | 08.22.19 13.29 | |
| o-Terphenyl | 84-15-1 | 91 | % | 70-135 | 08.22.19 13.29 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS23** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-027 | Date Collected: | 08.19.19 12.10 | Sample Depth: | 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.22.19 11.49 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.22.19 11.49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 80-120 | 08.22.19 11.49 | |
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 80-120 | 08.22.19 11.49 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS24** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-028 | Date Collected: | 08.19.19 12.15 | Sample Depth: | 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **2240** | 99.8 | mg/kg | 08.22.19 10.07 | | 10 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.22.19 13.49 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **319** | 25.0 | mg/kg | 08.22.19 13.49 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.22.19 13.49 | U | 1 |
| **Total TPH** | PHC635 | **319** | 25.0 | mg/kg | 08.22.19 13.49 | | 1 |
| **Total GRO-DRO** | PHC628 | **319** | 25.0 | mg/kg | 08.22.19 13.49 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-135 | 08.22.19 13.49 | |
| o-Terphenyl | 84-15-1 | 101 | % | 70-135 | 08.22.19 13.49 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS24** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-028 | Date Collected: | 08.19.19 12.15 | Sample Depth: | 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.22.19 12.09 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.22.19 12.09 | U | 1 |
| **Ethylbenzene** | 100-41-4 | **0.00341** | 0.00100 | mg/kg | 08.22.19 12.09 | | 1 |
| **m,p-Xylenes** | 179601-23-1 | **0.0260** | 0.00200 | mg/kg | 08.22.19 12.09 | | 1 |
| **o-Xylene** | 95-47-6 | **0.0183** | 0.00100 | mg/kg | 08.22.19 12.09 | | 1 |
| **Total Xylenes** | 1330-20-7 | **0.0443** | 0.00100 | mg/kg | 08.22.19 12.09 | | 1 |
| **Total BTEX** | | **0.0477** | 0.00100 | mg/kg | 08.22.19 12.09 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 118 | % | 80-120 | 08.22.19 12.09 | |
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 80-120 | 08.22.19 12.09 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS25** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-029 | Date Collected: | 08.19.19 13.10 | Sample Depth: | 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1050** | 49.7 | mg/kg | 08.22.19 10.13 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.22.19 14.09 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.22.19 14.09 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.22.19 14.09 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.22.19 14.09 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.22.19 14.09 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 110 | % | 70-135 | 08.22.19 14.09 | |
| o-Terphenyl | 84-15-1 | 101 | % | 70-135 | 08.22.19 14.09 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS25** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-029 | Date Collected: | 08.19.19 13.10 | Sample Depth: | 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |
| Toluene | 108-88-3 | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.22.19 12.29 | U | 1 |
| o-Xylene | 95-47-6 | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |
| Total BTEX | | <0.000992 | 0.000992 | mg/kg | 08.22.19 12.29 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.22.19 12.29 | |
| 1,4-Difluorobenzene | 540-36-3 | 100 | % | 80-120 | 08.22.19 12.29 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS26** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-030 | Date Collected: | 08.19.19 13.15 | Sample Depth: | 6 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **127** | 9.98 | mg/kg | 08.22.19 10.19 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.30 | Basis: | Wet Weight |
| Seq Number: | 3099498 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.22.19 14.29 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **146** | 24.9 | mg/kg | 08.22.19 14.29 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.22.19 14.29 | U | 1 |
| **Total TPH** | PHC635 | **146** | 24.9 | mg/kg | 08.22.19 14.29 | | 1 |
| **Total GRO-DRO** | PHC628 | **146** | 24.9 | mg/kg | 08.22.19 14.29 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 111 | % | 70-135 | 08.22.19 14.29 | |
| o-Terphenyl | 84-15-1 | 110 | % | 70-135 | 08.22.19 14.29 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS26** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-030 | Date Collected: | 08.19.19 13.15 | Sample Depth: | 6 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.22.19 12.49 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.22.19 12.49 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.22.19 12.49 | |
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 80-120 | 08.22.19 12.49 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS27** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-031 | Date Collected: | 08.19.19 13.25 | Sample Depth: | 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **66.5** | 10.0 | mg/kg | 08.22.19 11.03 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.23.19 13.30 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.23.19 13.30 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.23.19 13.30 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.23.19 13.30 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.23.19 13.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 106 | % | 70-135 | 08.23.19 13.30 | |
| o-Terphenyl | 84-15-1 | 103 | % | 70-135 | 08.23.19 13.30 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS27** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-031 | Date Collected: | 08.19.19 13.25 | Sample Depth: | 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |
| Toluene | 108-88-3 | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.22.19 13.08 | U | 1 |
| o-Xylene | 95-47-6 | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |
| Total BTEX | | <0.000996 | 0.000996 | mg/kg | 08.22.19 13.08 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 111 | % | 80-120 | 08.22.19 13.08 | |
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 80-120 | 08.22.19 13.08 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-032 | Date Collected: | 08.19.19 13.30 | Sample Depth: | 0 - 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **188** | 10.0 | mg/kg | 08.22.19 11.09 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Gasoline Range Hydrocarbons (GRO)** | PHC610 | **615** | 25.0 | mg/kg | 08.23.19 13.50 | | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **3810** | 25.0 | mg/kg | 08.23.19 13.50 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.23.19 13.50 | U | 1 |
| **Total TPH** | PHC635 | **4430** | 25.0 | mg/kg | 08.23.19 13.50 | | 1 |
| **Total GRO-DRO** | PHC628 | **4430** | 25.0 | mg/kg | 08.23.19 13.50 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 128 | % | 70-135 | 08.23.19 13.50 | |
| o-Terphenyl | 84-15-1 | 156 | % | 70-135 | 08.23.19 13.50 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW05** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-032 | Date Collected: | 08.19.19 13.30 | Sample Depth: | 0 - 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.500 | 0.500 | mg/kg | 08.24.19 16.13 | U | 500 |
| **Toluene** | 108-88-3 | **2.08** | 0.500 | mg/kg | 08.24.19 16.13 | | 500 |
| **Ethylbenzene** | 100-41-4 | **2.60** | 0.500 | mg/kg | 08.24.19 16.13 | | 500 |
| **m,p-Xylenes** | 179601-23-1 | **19.3** | 1.00 | mg/kg | 08.24.19 16.13 | | 500 |
| **o-Xylene** | 95-47-6 | **9.06** | 0.500 | mg/kg | 08.24.19 16.13 | | 500 |
| **Total Xylenes** | 1330-20-7 | **28.4** | 0.500 | mg/kg | 08.24.19 16.13 | | 500 |
| **Total BTEX** | | **33.0** | 0.500 | mg/kg | 08.24.19 16.13 | | 500 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 80-120 | 08.24.19 16.13 | |
| 4-Bromofluorobenzene | 460-00-4 | 139 | % | 80-120 | 08.24.19 16.13 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-033 | Date Collected: | 08.19.19 13.45 | Sample Depth: | 0 - 5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **56.7** | 10.0 | mg/kg | 08.22.19 11.16 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.23.19 14.10 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.23.19 14.10 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.23.19 14.10 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.23.19 14.10 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.23.19 14.10 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-135 | 08.23.19 14.10 | |
| o-Terphenyl | 84-15-1 | 84 | % | 70-135 | 08.23.19 14.10 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW06** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-033 | Date Collected: | 08.19.19 13.45 | Sample Depth: | 0 - 5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.24.19 15.33 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.33 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.24.19 15.33 | |
| 1,4-Difluorobenzene | 540-36-3 | 104 | % | 80-120 | 08.24.19 15.33 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS28** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-034 | Date Collected: | 08.19.19 13.55 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **894** | 49.4 | mg/kg | 08.22.19 11.22 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.23.19 14.30 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.23.19 14.30 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.23.19 14.30 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.23.19 14.30 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.23.19 14.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.23.19 14.30 | |
| o-Terphenyl | 84-15-1 | 99 | % | 70-135 | 08.23.19 14.30 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS28** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-034 | Date Collected: | 08.19.19 13.55 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.24.19 15.53 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.24.19 15.53 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 100 | % | 80-120 | 08.24.19 15.53 | |
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.24.19 15.53 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS29** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-035 | Date Collected: | 08.19.19 14.00 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **812** | 49.8 | mg/kg | 08.22.19 11.28 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.23.19 14.50 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.23.19 14.50 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.23.19 14.50 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.23.19 14.50 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.23.19 14.50 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-135 | 08.23.19 14.50 | |
| o-Terphenyl | 84-15-1 | 92 | % | 70-135 | 08.23.19 14.50 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS29** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-035 | Date Collected: | 08.19.19 14.00 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.22.19 15.48 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |
| Total BTEX | | <0.00101 | 0.00101 | mg/kg | 08.22.19 15.48 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.22.19 15.48 | |
| 4-Bromofluorobenzene | 460-00-4 | 108 | % | 80-120 | 08.22.19 15.48 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS30** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-036 | Date Collected: | 08.19.19 14.10 | Sample Depth: | 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **854** | 50.1 | mg/kg | 08.22.19 11.35 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 15.10 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 15.10 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 15.10 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 15.10 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 15.10 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-135 | 08.23.19 15.10 | |
| o-Terphenyl | 84-15-1 | 93 | % | 70-135 | 08.23.19 15.10 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS30** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-036 | Date Collected: | 08.19.19 14.10 | Sample Depth: | 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.22.19 16.08 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.22.19 16.08 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 120 | % | 80-120 | 08.22.19 16.08 | |
| 1,4-Difluorobenzene | 540-36-3 | 110 | % | 80-120 | 08.22.19 16.08 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW07** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-037 | Date Collected: | 08.19.19 14.20 | Sample Depth: | 0 - 7 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **49.8** | 10.0 | mg/kg | 08.22.19 11.41 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.23.19 15.30 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.23.19 15.30 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.23.19 15.30 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.23.19 15.30 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.23.19 15.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 105 | % | 70-135 | 08.23.19 15.30 | |
| o-Terphenyl | 84-15-1 | 85 | % | 70-135 | 08.23.19 15.30 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW07** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-037 | Date Collected: | 08.19.19 14.20 | Sample Depth: | 0 - 7 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.22.19 16.48 | U | 1 |
| **Toluene** | 108-88-3 | **0.00107** | 0.000998 | mg/kg | 08.22.19 16.48 | | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.22.19 16.48 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.22.19 16.48 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.22.19 16.48 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.22.19 16.48 | U | 1 |
| **Total BTEX** | | **0.00107** | 0.000998 | mg/kg | 08.22.19 16.48 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 117 | % | 80-120 | 08.22.19 16.48 | |
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.22.19 16.48 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW08** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-038 | Date Collected: | 08.19.19 14.30 | Sample Depth: | 0 - 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **724** | 50.1 | mg/kg | 08.22.19 12.00 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.23.19 16.10 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <24.9 | 24.9 | mg/kg | 08.23.19 16.10 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.23.19 16.10 | U | 1 |
| Total TPH | PHC635 | <24.9 | 24.9 | mg/kg | 08.23.19 16.10 | U | 1 |
| Total GRO-DRO | PHC628 | <24.9 | 24.9 | mg/kg | 08.23.19 16.10 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 99 | % | 70-135 | 08.23.19 16.10 | |
| o-Terphenyl | 84-15-1 | 87 | % | 70-135 | 08.23.19 16.10 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW08** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-038 | Date Collected: | 08.19.19 14.30 | Sample Depth: | 0 - 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |
| Toluene | 108-88-3 | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.22.19 17.07 | U | 1 |
| o-Xylene | 95-47-6 | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |
| Total BTEX | | <0.00101 | 0.00101 | mg/kg | 08.22.19 17.07 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 110 | % | 80-120 | 08.22.19 17.07 | |
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.22.19 17.07 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS31** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-039 | Date Collected: | 08.19.19 14.40 | Sample Depth: | 2.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **646** | 50.0 | mg/kg | 08.22.19 12.25 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 16.30 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 16.30 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 16.30 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 16.30 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 16.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 108 | % | 70-135 | 08.23.19 16.30 | |
| o-Terphenyl | 84-15-1 | 101 | % | 70-135 | 08.23.19 16.30 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **FS31** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-039 | Date Collected: | 08.19.19 14.40 | Sample Depth: | 2.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.22.19 18.21 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.21 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 97 | % | 80-120 | 08.22.19 18.21 | |
| 4-Bromofluorobenzene | 460-00-4 | 116 | % | 80-120 | 08.22.19 18.21 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW09** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-040 | Date Collected: | 08.19.19 14.50 | Sample Depth: | 0 - 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **42.9** | 9.94 | mg/kg | 08.22.19 12.32 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 16.50 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 16.50 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 16.50 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 16.50 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 16.50 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 102 | % | 70-135 | 08.23.19 16.50 | |
| o-Terphenyl | 84-15-1 | 85 | % | 70-135 | 08.23.19 16.50 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW09** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-040 | Date Collected: | 08.19.19 14.50 | Sample Depth: | 0 - 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.22.19 09.08 | Basis: | Wet Weight |
| Seq Number: | 3099404 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |
| Toluene | 108-88-3 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00199 | 0.00199 | mg/kg | 08.22.19 18.41 | U | 1 |
| o-Xylene | 95-47-6 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |
| Total BTEX | | <0.000994 | 0.000994 | mg/kg | 08.22.19 18.41 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 119 | % | 80-120 | 08.22.19 18.41 | |
| 1,4-Difluorobenzene | 540-36-3 | 108 | % | 80-120 | 08.22.19 18.41 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-041 | Date Collected: | 08.19.19 15.00 | Sample Depth: | 0 - 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **801** | 49.9 | mg/kg | 08.22.19 12.38 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.23.19 17.10 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **86.2** | 25.0 | mg/kg | 08.23.19 17.10 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.23.19 17.10 | U | 1 |
| **Total TPH** | PHC635 | **86.2** | 25.0 | mg/kg | 08.23.19 17.10 | | 1 |
| **Total GRO-DRO** | PHC628 | **86.2** | 25.0 | mg/kg | 08.23.19 17.10 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 103 | % | 70-135 | 08.23.19 17.10 | |
| o-Terphenyl | 84-15-1 | 89 | % | 70-135 | 08.23.19 17.10 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW10** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-041 | Date Collected: | 08.19.19 15.00 | Sample Depth: | 0 - 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.24.19 13.34 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.24.19 13.34 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.24.19 13.34 | |
| 1,4-Difluorobenzene | 540-36-3 | 103 | % | 80-120 | 08.24.19 13.34 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-042 | Date Collected: | 08.19.19 15.10 | Sample Depth: | 0 - 4 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **47.0** | 9.92 | mg/kg | 08.22.19 12.44 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 17.30 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 17.30 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 17.30 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 17.30 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 17.30 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 140 | % | 70-135 | 08.23.19 17.30 | ** |
| o-Terphenyl | 84-15-1 | 123 | % | 70-135 | 08.23.19 17.30 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW11** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-042 | Date Collected: | 08.19.19 15.10 | Sample Depth: | 0 - 4 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |
| Toluene | 108-88-3 | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.24.19 13.54 | U | 1 |
| o-Xylene | 95-47-6 | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |
| Total BTEX | | <0.000992 | 0.000992 | mg/kg | 08.24.19 13.54 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 107 | % | 80-120 | 08.24.19 13.54 | |
| 4-Bromofluorobenzene | 460-00-4 | 104 | % | 80-120 | 08.24.19 13.54 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-043 | Date Collected: | 08.19.19 15.20 | Sample Depth: | 0 - 2.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1760** | 49.7 | mg/kg | 08.22.19 12.51 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <24.9 | 24.9 | mg/kg | 08.23.19 17.50 | U | 1 |
| **Diesel Range Organics (DRO)** | C10C28DRO | **140** | 24.9 | mg/kg | 08.23.19 17.50 | | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <24.9 | 24.9 | mg/kg | 08.23.19 17.50 | U | 1 |
| **Total TPH** | PHC635 | **140** | 24.9 | mg/kg | 08.23.19 17.50 | | 1 |
| **Total GRO-DRO** | PHC628 | **140** | 24.9 | mg/kg | 08.23.19 17.50 | | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 126 | % | 70-135 | 08.23.19 17.50 | |
| o-Terphenyl | 84-15-1 | 129 | % | 70-135 | 08.23.19 17.50 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW12** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-043 | Date Collected: | 08.19.19 15.20 | Sample Depth: | 0 - 2.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |
| Toluene | 108-88-3 | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00198 | 0.00198 | mg/kg | 08.24.19 14.13 | U | 1 |
| o-Xylene | 95-47-6 | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |
| Total BTEX | | <0.000990 | 0.000990 | mg/kg | 08.24.19 14.13 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 109 | % | 80-120 | 08.24.19 14.13 | |
| 1,4-Difluorobenzene | 540-36-3 | 105 | % | 80-120 | 08.24.19 14.13 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-044 | Date Collected: | 08.19.19 15.30 | Sample Depth: | 0 - 2.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **684** | 49.7 | mg/kg | 08.22.19 12.57 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 18.11 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 18.11 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 18.11 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 18.11 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 18.11 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 174 | % | 70-135 | 08.23.19 18.11 | ** |
| o-Terphenyl | 84-15-1 | 160 | % | 70-135 | 08.23.19 18.11 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW13** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-044 | Date Collected: | 08.19.19 15.30 | Sample Depth: | 0 - 2.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.24.19 14.33 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.33 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 4-Bromofluorobenzene | 460-00-4 | 107 | % | 80-120 | 08.24.19 14.33 | |
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.24.19 14.33 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-045 | Date Collected: | 08.19.19 15.40 | Sample Depth: | 0 - 2.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **1450** | 49.8 | mg/kg | 08.22.19 13.04 | | 5 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.0 | 25.0 | mg/kg | 08.23.19 18.31 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.0 | 25.0 | mg/kg | 08.23.19 18.31 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.0 | 25.0 | mg/kg | 08.23.19 18.31 | U | 1 |
| Total TPH | PHC635 | <25.0 | 25.0 | mg/kg | 08.23.19 18.31 | U | 1 |
| Total GRO-DRO | PHC628 | <25.0 | 25.0 | mg/kg | 08.23.19 18.31 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 167 | % | 70-135 | 08.23.19 18.31 | ** |
| o-Terphenyl | 84-15-1 | 153 | % | 70-135 | 08.23.19 18.31 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW14** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-045 | Date Collected: | 08.19.19 15.40 | Sample Depth: | 0 - 2.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |
| Toluene | 108-88-3 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00201 | 0.00201 | mg/kg | 08.24.19 14.54 | U | 1 |
| o-Xylene | 95-47-6 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |
| Total BTEX | | <0.00100 | 0.00100 | mg/kg | 08.24.19 14.54 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.24.19 14.54 | |
| 4-Bromofluorobenzene | 460-00-4 | 99 | % | 80-120 | 08.24.19 14.54 | |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-046 | Date Collected: | 08.19.19 15.50 | Sample Depth: | 0 - 2.5 ft |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | Chloride by EPA 300 | | | Prep Method: | E300P |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | MAB | Date Prep: | 08.21.19 10.08 | Basis: | Wet Weight |
| Seq Number: | 3099406 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| **Chloride** | 16887-00-6 | **238** | 9.94 | mg/kg | 08.22.19 13.10 | | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Analytical Method: | TPH by SW8015 Mod | | | Prep Method: | SW8015P |
| Tech: | DTH | | | % Moisture: | |
| Analyst: | DTH | Date Prep: | 08.23.19 10.00 | Basis: | Wet Weight |
| Seq Number: | 3099584 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | PHC610 | <25.1 | 25.1 | mg/kg | 08.23.19 18.51 | U | 1 |
| Diesel Range Organics (DRO) | C10C28DRO | <25.1 | 25.1 | mg/kg | 08.23.19 18.51 | U | 1 |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835 | <25.1 | 25.1 | mg/kg | 08.23.19 18.51 | U | 1 |
| Total TPH | PHC635 | <25.1 | 25.1 | mg/kg | 08.23.19 18.51 | U | 1 |
| Total GRO-DRO | PHC628 | <25.1 | 25.1 | mg/kg | 08.23.19 18.51 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1-Chlorooctane | 111-85-3 | 201 | % | 70-135 | 08.23.19 18.51 | ** |
| o-Terphenyl | 84-15-1 | 179 | % | 70-135 | 08.23.19 18.51 | ** |

# Certificate of Analytical Results 634606

## LT Environmental, Inc., Arvada, CO

Picket Draw Federal #001

| | | | | | |
|---|---|---|---|---|---|
| Sample Id: | **SW15** | Matrix: | Soil | Date Received: | 08.20.19 12.50 |
| Lab Sample Id: | 634606-046 | Date Collected: | 08.19.19 15.50 | Sample Depth: | 0 - 2.5 ft |
| Analytical Method: | BTEX by EPA 8021B | | | Prep Method: | SW5030B |
| Tech: | MAB | | | % Moisture: | |
| Analyst: | CAC | Date Prep: | 08.23.19 14.08 | Basis: | Wet Weight |
| Seq Number: | 3099530 | | | | |

| Parameter | Cas Number | Result | RL | Units | Analysis Date | Flag | Dil |
|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |
| Toluene | 108-88-3 | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |
| Ethylbenzene | 100-41-4 | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |
| m,p-Xylenes | 179601-23-1 | <0.00200 | 0.00200 | mg/kg | 08.24.19 15.14 | U | 1 |
| o-Xylene | 95-47-6 | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |
| Total Xylenes | 1330-20-7 | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |
| Total BTEX | | <0.000998 | 0.000998 | mg/kg | 08.24.19 15.14 | U | 1 |

| Surrogate | Cas Number | % Recovery | Units | Limits | Analysis Date | Flag |
|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 540-36-3 | 102 | % | 80-120 | 08.24.19 15.14 | |
| 4-Bromofluorobenzene | 460-00-4 | 106 | % | 80-120 | 08.24.19 15.14 | |

# Flagging Criteria

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

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

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

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

**F** RPD exceeded lab control limits.

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

**U** Analyte was not detected.

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

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

**K** Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684654-1-BLK LCS Sample Id: 7684654-1-BKS LCSD Sample Id: 7684654-1-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 | 300 | 300 | 100 | 301 | 100 | 80-120 | 0 | 20 | mg/kg | 08.20.19 18:32 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099263 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684648-1-BLK LCS Sample Id: 7684648-1-BKS LCSD Sample Id: 7684648-1-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 | 300 | 293 | 98 | 290 | 97 | 80-120 | 1 | 20 | mg/kg | 08.21.19 20:10 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099406 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684650-1-BLK LCS Sample Id: 7684650-1-BKS LCSD Sample Id: 7684650-1-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 | 100 | 98.7 | 99 | 99.6 | 100 | 80-120 | 1 | 20 | mg/kg | 08.22.19 09:35 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-001 MS Sample Id: 634583-001 S MSD Sample Id: 634583-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1380 | 2470 | 4020 | 107 | 4040 | 107 | 80-120 | 0 | 20 | mg/kg | 08.20.19 18:52 | |

**Analytical Method:** **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3099290 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634583-011 MS Sample Id: 634583-011 S MSD Sample Id: 634583-011 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1250 | 1250 | 2670 | 114 | 2600 | 108 | 80-120 | 3 | 20 | mg/kg | 08.20.19 20:33 | |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099263 — Matrix: Soil — Date Prep: 08.21.19
Parent Sample Id: 634606-007 — MS Sample Id: 634606-007 S — MSD Sample Id: 634606-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 195 | 251 | 472 | 110 | 468 | 109 | 80-120 | 1 | 20 | mg/kg | 08.21.19 20:30 | |

**Analytical Method:** Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099263 — Matrix: Soil — Date Prep: 08.21.19
Parent Sample Id: 634606-017 — MS Sample Id: 634606-017 S — MSD Sample Id: 634606-017 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 43.0 | 248 | 279 | 95 | 291 | 99 | 80-120 | 4 | 20 | mg/kg | 08.21.19 22:02 | |

**Analytical Method:** Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099406 — Matrix: Soil — Date Prep: 08.21.19
Parent Sample Id: 634606-027 — MS Sample Id: 634606-027 S — MSD Sample Id: 634606-027 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1450 | 2490 | 4010 | 103 | 4130 | 108 | 80-120 | 3 | 20 | mg/kg | 08.22.19 09:54 | |

**Analytical Method:** Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3099406 — Matrix: Soil — Date Prep: 08.21.19
Parent Sample Id: 634606-037 — MS Sample Id: 634606-037 S — MSD Sample Id: 634606-037 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49.8 | 251 | 279 | 91 | 284 | 94 | 80-120 | 2 | 20 | mg/kg | 08.22.19 11:47 | |

**Analytical Method:** TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3099052 — Matrix: Solid — Date Prep: 08.20.19
MB Sample Id: 7684595-1-BLK — LCS Sample Id: 7684595-1-BKS — LCSD Sample Id: 7684595-1-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) | <9.90 | 1000 | 1000 | 100 | 974 | 98 | 70-135 | 3 | 35 | mg/kg | 08.20.19 11:28 | |
| Diesel Range Organics (DRO) | <9.90 | 1000 | 1030 | 103 | 992 | 100 | 70-135 | 4 | 35 | mg/kg | 08.20.19 11:28 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 130 | | 115 | | 115 | | 70-135 | % | 08.20.19 11:28 |
| o-Terphenyl | 128 | | 118 | | 116 | | 70-135 | % | 08.20.19 11:28 |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099358 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684790-1-BLK LCS Sample Id: 7684790-1-BKS LCSD Sample Id: 7684790-1-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) | <9.88 | 1000 | 1130 | 113 | 988 | 99 | 70-135 | 13 | 35 | mg/kg | 08.21.19 13:11 | |
| Diesel Range Organics (DRO) | 11.9 | 1000 | 1180 | 118 | 1020 | 102 | 70-135 | 15 | 35 | mg/kg | 08.21.19 13:11 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 112 | | 142 | ** | 123 | | 70-135 | % | 08.21.19 13:11 |
| o-Terphenyl | 111 | | 152 | ** | 127 | | 70-135 | % | 08.21.19 13:11 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099498 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684879-1-BLK LCS Sample Id: 7684879-1-BKS LCSD Sample Id: 7684879-1-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) | <9.88 | 1000 | 936 | 94 | 901 | 90 | 70-135 | 4 | 35 | mg/kg | 08.22.19 11:26 | |
| Diesel Range Organics (DRO) | <9.88 | 1000 | 902 | 90 | 883 | 88 | 70-135 | 2 | 35 | mg/kg | 08.22.19 11:26 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 110 | | 115 | | 116 | | 70-135 | % | 08.22.19 11:26 |
| o-Terphenyl | 95 | | 104 | | 107 | | 70-135 | % | 08.22.19 11:26 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684955-1-BLK LCS Sample Id: 7684955-1-BKS LCSD Sample Id: 7684955-1-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) | <9.88 | 1000 | 1020 | 102 | 999 | 100 | 70-135 | 2 | 35 | mg/kg | 08.23.19 11:09 | |
| Diesel Range Organics (DRO) | <9.88 | 1000 | 1010 | 101 | 998 | 100 | 70-135 | 1 | 35 | mg/kg | 08.23.19 11:09 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 115 | | 126 | | 121 | | 70-135 | % | 08.23.19 11:09 |
| o-Terphenyl | 109 | | 117 | | 114 | | 70-135 | % | 08.23.19 11:09 |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099052 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 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) | <9.91 | 1000 | 951 | 95 | 964 | 96 | 70-135 | 1 | 35 | mg/kg | 08.20.19 12:29 | |
| Diesel Range Organics (DRO) | <9.91 | 1000 | 974 | 97 | 988 | 99 | 70-135 | 1 | 35 | mg/kg | 08.20.19 12:29 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 114 | | 108 | | 70-135 | % | 08.20.19 12:29 |
| o-Terphenyl | 122 | | 112 | | 70-135 | % | 08.20.19 12:29 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099358 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-006 MS Sample Id: 634606-006 S MSD Sample Id: 634606-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | <9.87 | 999 | 970 | 97 | 981 | 98 | 70-135 | 1 | 35 | mg/kg | 08.21.19 14:12 | |
| Diesel Range Organics (DRO) | 18.2 | 999 | 1000 | 98 | 1020 | 100 | 70-135 | 2 | 35 | mg/kg | 08.21.19 14:12 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 134 | | 133 | | 70-135 | % | 08.21.19 14:12 |
| o-Terphenyl | 128 | | 134 | | 70-135 | % | 08.21.19 14:12 |

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099584 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634914-021 MS Sample Id: 634914-021 S MSD Sample Id: 634914-021 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) | <9.92 | 1000 | 1010 | 101 | 982 | 98 | 70-135 | 3 | 35 | mg/kg | 08.23.19 12:10 | |
| Diesel Range Organics (DRO) | <9.92 | 1000 | 1030 | 103 | 956 | 96 | 70-135 | 7 | 35 | mg/kg | 08.23.19 12:10 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1-Chlorooctane | 129 | | 126 | | 70-135 | % | 08.23.19 12:10 |
| o-Terphenyl | 109 | | 107 | | 70-135 | % | 08.23.19 12:10 |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3099498 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634606-025 MS Sample Id: 634606-025 S

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | Limits | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|
| Gasoline Range Hydrocarbons (GRO) | 901 | 995 | 881 | 0 | 70-135 | mg/kg | 08.22.19 12:27 | X |
| Diesel Range Organics (DRO) | 1170 | 995 | 1110 | 0 | 70-135 | mg/kg | 08.22.19 12:27 | X |

| Surrogate | MS %Rec | MS Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|
| 1-Chlorooctane | 116 | | 70-135 | % | 08.22.19 12:27 |
| o-Terphenyl | 115 | | 70-135 | % | 08.22.19 12:27 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Solid Date Prep: 08.20.19
MB Sample Id: 7684594-1-BLK LCS Sample Id: 7684594-1-BKS LCSD Sample Id: 7684594-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00101 | 0.101 | 0.0926 | 92 | 0.0944 | 95 | 70-130 | 2 | 35 | mg/kg | 08.20.19 10:59 | |
| Toluene | <0.00101 | 0.101 | 0.0906 | 90 | 0.0948 | 95 | 70-130 | 5 | 35 | mg/kg | 08.20.19 10:59 | |
| Ethylbenzene | <0.000503 | 0.101 | 0.0920 | 91 | 0.0956 | 96 | 71-129 | 4 | 35 | mg/kg | 08.20.19 10:59 | |
| m,p-Xylenes | <0.00101 | 0.201 | 0.189 | 94 | 0.193 | 97 | 70-135 | 2 | 35 | mg/kg | 08.20.19 10:59 | |
| o-Xylene | <0.000503 | 0.101 | 0.0951 | 94 | 0.0962 | 97 | 71-133 | 1 | 35 | mg/kg | 08.20.19 10:59 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 94 | | 103 | | 98 | | 80-120 | % | 08.20.19 10:59 |
| 4-Bromofluorobenzene | 93 | | 110 | | 103 | | 80-120 | % | 08.20.19 10:59 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099361 Matrix: Solid Date Prep: 08.21.19
MB Sample Id: 7684795-1-BLK LCS Sample Id: 7684795-1-BKS LCSD Sample Id: 7684795-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00100 | 0.100 | 0.106 | 106 | 0.106 | 106 | 70-130 | 0 | 35 | mg/kg | 08.21.19 10:41 | |
| Toluene | <0.00100 | 0.100 | 0.103 | 103 | 0.104 | 104 | 70-130 | 1 | 35 | mg/kg | 08.21.19 10:41 | |
| Ethylbenzene | 0.000510 | 0.100 | 0.110 | 110 | 0.111 | 111 | 71-129 | 1 | 35 | mg/kg | 08.21.19 10:41 | |
| m,p-Xylenes | <0.00100 | 0.200 | 0.229 | 115 | 0.229 | 115 | 70-135 | 0 | 35 | mg/kg | 08.21.19 10:41 | |
| o-Xylene | <0.000500 | 0.100 | 0.114 | 114 | 0.114 | 114 | 71-133 | 0 | 35 | mg/kg | 08.21.19 10:41 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 104 | | 111 | | 105 | | 80-120 | % | 08.21.19 10:41 |
| 4-Bromofluorobenzene | 106 | | 122 | ** | 118 | | 80-120 | % | 08.21.19 10:41 |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099404 Matrix: Solid Date Prep: 08.22.19
MB Sample Id: 7684821-1-BLK LCS Sample Id: 7684821-1-BKS LCSD Sample Id: 7684821-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00100 | 0.100 | 0.101 | 101 | 0.104 | 104 | 70-130 | 3 | 35 | mg/kg | 08.22.19 09:30 | |
| Toluene | <0.00100 | 0.100 | 0.0942 | 94 | 0.0985 | 99 | 70-130 | 4 | 35 | mg/kg | 08.22.19 09:30 | |
| Ethylbenzene | <0.00100 | 0.100 | 0.101 | 101 | 0.106 | 106 | 71-129 | 5 | 35 | mg/kg | 08.22.19 09:30 | |
| m,p-Xylenes | <0.00200 | 0.200 | 0.210 | 105 | 0.220 | 110 | 70-135 | 5 | 35 | mg/kg | 08.22.19 09:30 | |
| o-Xylene | <0.00100 | 0.100 | 0.104 | 104 | 0.110 | 110 | 71-133 | 6 | 35 | mg/kg | 08.22.19 09:30 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 116 | | 112 | | 106 | | 80-120 | % | 08.22.19 09:30 |
| 4-Bromofluorobenzene | 117 | | 116 | | 120 | | 80-120 | % | 08.22.19 09:30 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099530 Matrix: Solid Date Prep: 08.23.19
MB Sample Id: 7684919-1-BLK LCS Sample Id: 7684919-1-BKS LCSD Sample Id: 7684919-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00100 | 0.100 | 0.0902 | 90 | 0.0906 | 91 | 70-130 | 0 | 35 | mg/kg | 08.23.19 19:45 | |
| Toluene | <0.00100 | 0.100 | 0.0999 | 100 | 0.0950 | 95 | 70-130 | 5 | 35 | mg/kg | 08.23.19 19:45 | |
| Ethylbenzene | <0.00100 | 0.100 | 0.114 | 114 | 0.110 | 110 | 71-129 | 4 | 35 | mg/kg | 08.23.19 19:45 | |
| m,p-Xylenes | <0.00200 | 0.200 | 0.231 | 116 | 0.226 | 113 | 70-135 | 2 | 35 | mg/kg | 08.23.19 19:45 | |
| o-Xylene | <0.00100 | 0.100 | 0.114 | 114 | 0.112 | 112 | 71-133 | 2 | 35 | mg/kg | 08.23.19 19:45 | |

| Surrogate | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 111 | | 106 | | 101 | | 80-120 | % | 08.23.19 19:45 |
| 4-Bromofluorobenzene | 118 | | 112 | | 114 | | 80-120 | % | 08.23.19 19:45 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099039 Matrix: Soil Date Prep: 08.20.19
Parent Sample Id: 634529-001 MS Sample Id: 634529-001 S MSD Sample Id: 634529-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.000990 | 0.0990 | 0.0979 | 99 | 0.0923 | 93 | 70-130 | 6 | 35 | mg/kg | 08.20.19 12:38 | |
| Toluene | <0.000990 | 0.0990 | 0.0932 | 94 | 0.0912 | 92 | 70-130 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| Ethylbenzene | <0.000990 | 0.0990 | 0.0956 | 97 | 0.0941 | 95 | 71-129 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| m,p-Xylenes | <0.000990 | 0.198 | 0.195 | 98 | 0.191 | 96 | 70-135 | 2 | 35 | mg/kg | 08.20.19 12:38 | |
| o-Xylene | <0.000990 | 0.0990 | 0.0968 | 98 | 0.0948 | 95 | 71-133 | 2 | 35 | mg/kg | 08.20.19 12:38 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 105 | | 106 | | 80-120 | % | 08.20.19 12:38 |
| 4-Bromofluorobenzene | 109 | | 110 | | 80-120 | % | 08.20.19 12:38 |

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 634606

## LT Environmental, Inc.

Picket Draw Federal #001

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099361 Matrix: Soil Date Prep: 08.21.19
Parent Sample Id: 634606-006 MS Sample Id: 634606-006 S MSD Sample Id: 634606-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.000998 | 0.0998 | 0.0918 | 92 | 0.0932 | 94 | 70-130 | 2 | 35 | mg/kg | 08.21.19 12:21 | |
| Toluene | <0.000499 | 0.0998 | 0.0933 | 93 | 0.0955 | 96 | 70-130 | 2 | 35 | mg/kg | 08.21.19 12:21 | |
| Ethylbenzene | 0.000984 | 0.0998 | 0.107 | 106 | 0.0996 | 99 | 71-129 | 7 | 35 | mg/kg | 08.21.19 12:21 | |
| m,p-Xylenes | <0.000998 | 0.200 | 0.202 | 101 | 0.204 | 103 | 70-135 | 1 | 35 | mg/kg | 08.21.19 12:21 | |
| o-Xylene | <0.000499 | 0.0998 | 0.101 | 101 | 0.102 | 103 | 71-133 | 1 | 35 | mg/kg | 08.21.19 12:21 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 109 | | 105 | | 80-120 | % | 08.21.19 12:21 |
| 4-Bromofluorobenzene | 124 | ** | 126 | ** | 80-120 | % | 08.21.19 12:21 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099404 Matrix: Soil Date Prep: 08.22.19
Parent Sample Id: 634606-025 MS Sample Id: 634606-025 S MSD Sample Id: 634606-025 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.00100 | 0.100 | 0.0912 | 91 | 0.0879 | 88 | 70-130 | 4 | 35 | mg/kg | 08.22.19 10:10 | |
| Toluene | <0.00100 | 0.100 | 0.0857 | 86 | 0.0807 | 81 | 70-130 | 6 | 35 | mg/kg | 08.22.19 10:10 | |
| Ethylbenzene | 0.00117 | 0.100 | 0.0897 | 89 | 0.0834 | 82 | 71-129 | 7 | 35 | mg/kg | 08.22.19 10:10 | |
| m,p-Xylenes | 0.00576 | 0.200 | 0.183 | 89 | 0.169 | 81 | 70-135 | 8 | 35 | mg/kg | 08.22.19 10:10 | |
| o-Xylene | 0.00533 | 0.100 | 0.0971 | 92 | 0.0899 | 85 | 71-133 | 8 | 35 | mg/kg | 08.22.19 10:10 | |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 108 | | 93 | | 80-120 | % | 08.22.19 10:10 |
| 4-Bromofluorobenzene | 118 | | 118 | | 80-120 | % | 08.22.19 10:10 |

**Analytical Method:** **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099530 Matrix: Soil Date Prep: 08.23.19
Parent Sample Id: 634675-001 MS Sample Id: 634675-001 S MSD Sample Id: 634675-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date | Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | <0.000996 | 0.0996 | 0.0893 | 90 | 0.0936 | 94 | 70-130 | 5 | 35 | mg/kg | 08.23.19 20:25 | |
| Toluene | 0.110 | 0.0996 | 0.127 | 17 | 0.121 | 11 | 70-130 | 5 | 35 | mg/kg | 08.23.19 20:25 | X |
| Ethylbenzene | 0.204 | 0.0996 | 0.204 | 0 | 0.188 | 0 | 71-129 | 8 | 35 | mg/kg | 08.23.19 20:25 | X |
| m,p-Xylenes | 0.690 | 0.199 | 0.622 | 0 | 0.567 | 0 | 70-135 | 9 | 35 | mg/kg | 08.23.19 20:25 | X |
| o-Xylene | 0.392 | 0.0996 | 0.363 | 0 | 0.333 | 0 | 71-133 | 9 | 35 | mg/kg | 08.23.19 20:25 | X |

| Surrogate | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 108 | | 114 | | 80-120 | % | 08.23.19 20:25 |
| 4-Bromofluorobenzene | 119 | | 117 | | 80-120 | % | 08.23.19 20:25 |

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

# Chain of Custody

XENCO LABORATORIES

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

**Work Order No:** 620346006

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 012919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes (No) | Wet Ice: | (Yes) No | |
| Temperature (°C): | 1.4 | Thermometer ID | | |
| Received Intact: | (Yes) No | TNM007 | | |
| Cooler Custody Seals: | Yes (No) N/A | Correction Factor: | -0.2 | |
| Sample Custody Seals: | Yes (No) N/A | Total Containers: | 40 | |

**ANALYSIS REQUEST**

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |
|---|---|---|---|---|---|---|---|---|
| FS01 | S | 08/15/2019 | 10:40 | 1' | 1 | X | X | X |
| FS02 | | | 10:45 | 1' | 1 | | | |
| FS03 | | | 10:50 | 1' | 1 | | | |
| FS04 | | | 11:00 | 1' | 1 | | | |
| FS05 | | | 11:05 | 1' | 1 | | | |
| FS06 | | | 11:10 | 1' | 1 | | | |
| FS07 | | | 11:20 | 2' | 1 | | | |
| FS08 | | | 11:25 | 2' | 1 | | | |
| FS09 | | | 11:30 | 2' | 1 | | | |
| FS10 | | | 11:35 | 2' | 1 | | | |

**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 | | 08/20/19 12:30 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

# Chain of Custody

XENCO LABORATORIES

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

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**Work Order No:** 12346206

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 012919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Temperature (°C): | | Thermometer ID | see pg 1 | |
| Received Intact: | Yes No | | | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| FS11 | S | 08/15/2019 | 11:45 | 2' | 1 | X | X | X |
| FS12 | | | 11:55 | 3' | | | | |
| SW01 | | | 12:05 | 0-1' | | | | |
| SW02 | | | 12:10 | 0-3' | | | | |
| FS13 | | | 12:20 | 3' | | | | |
| SW03 | | | 12:30 | 0-7' | | | | |
| SW04 | | | 13:00 | 0-4' | | | | |
| FS14 | | | 13:20 | 3.0' | | | | |
| FS15 | | | 14:15 | 4' | | | | |
| FS16 | | | 14:25 | 4' | | | | |

**ANALYSIS REQUEST**

**Work Order Notes**

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

**Sample Comments**

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

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

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

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

| | Relinquished by: (Signature) | Received by: (Signature) | Date/Time | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|---|---|---|---|---|---|---|
| 1 | | | 08/20/2019 12:5 | 2 | | |
| 3 | | | | 4 | | |
| 5 | | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# Chain of Custody

XENCO LABORATORIES

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

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**Work Order No:** 634006

| | | | |
|---|---|---|---|
| Project Manager: | Dan Moir | Bill to: (if different) | Kyle Littrell |
| Company Name: | LT Environmental, Inc., Permian office | Company Name: | XTO Energy |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 012919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | |
|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No |
| Temperature (°C): | | Thermometer ID | |
| Received Intact: | Yes No | | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| FS17 | S | 08/15/2019 | 14:35 | 4' | 1 | X | X | X |
| FS18 | S | | 14:45 | 4' | 1 | | | |
| FS19 | S | | 14:55 | 4' | 1 | | | |
| FS20 | S | | 15:10 | 4' | 1 | | | |
| FS21 | S | | 15:20 | 4' | 1 | | | |
| FS22 | S | 08/19/2019 | 12:00 | 5' | 1 | | | |
| FS23 | S | | 12:10 | 5' | 1 | | | |
| FS24 | S | | 12:15 | 5' | 1 | | | |
| FS25 | S | | 13:10 | 5' | 1 | | | |
| FS26 | S | | 13:15 | 6' | 1 | | | |

**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 | | 08/20/19 12:50 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

# Chain of Custody

Work Order No: E341006

XENCO LABORATORIES

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

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 012919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

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

ANALYSIS REQUEST

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |
|---|---|---|---|---|---|---|---|---|
| FS27 | S | 08/19/2019 | 13:25 | 7' | 1 | X | X | X |
| SW05 | | | 13:30 | 0-5' | 1 | | | |
| SW06 | | | 13:45 | 0-5' | 1 | | | |
| FS28 | | | 13:55 | 4' | 1 | | | |
| FS29 | | | 14:00 | 4' | 1 | | | |
| FS30 | | | 14:10 | 4' | 1 | | | |
| SW07 | | | 14:20 | 0-7' | 1 | | | |
| SW08 | | | 14:30 | 0-4' | 1 | | | |
| FS31 | | | 14:40 | 2.5' | 1 | | | |
| SW09 | | | 14:50 | 0-4' | 1 | | | |

**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 | | | 08/20/19 12:5 | 2 | | | |
| 3 | | | | 4 | | | |
| 5 | | | | 6 | | | |

Revised Date 051418 Rev. 2018.1

# Chain of Custody

Work Order No: 634166

XENCO LABORATORIES

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

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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 |
| Address: | 3300 North A Street | Address: | |
| City, State ZIP: | Midland, Tx 79705 | City, State ZIP: | |
| Phone: | (432) 236-3849 | Email: | llaumbach@ltenv.com, dmoir@ltenv.com |

**Work Order Comments**

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

| | | | |
|---|---|---|---|
| Project Name: | Pickett Draw Federal #001 | Turn Around | |
| Project Number: | 12919150 | Routine | X |
| P.O. Number: | Eddy County | Rush: | |
| Sampler's Name: | Lynda Laumbach | Due Date: | |

| SAMPLE RECEIPT | | | | |
|---|---|---|---|---|
| Temp Blank: | Yes No | Wet Ice: | Yes No | |
| Temperature (°C): | | Thermometer ID | See pg 1 | |
| Received Intact: | Yes No | | | |
| Cooler Custody Seals: | Yes No N/A | Correction Factor: | 0 | |
| 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) |
|---|---|---|---|---|---|---|---|---|
| SW10 | S | 08/19/2019 | 15:00 | 0-4.0' | 1 | X | X | X |
| SW11 | S | | 15:10 | 0-4.0' | 1 | | | |
| SW12 | S | | 15:20 | 0-2.5' | 1 | | | |
| SW13 | S | | 15:30 | 0-2.5' | 1 | | | |
| SW14 | S | | 15:40 | 0-2.5' | 1 | | | |
| SW15 | S | | 15:50 | 0-2.5' | 1 | | | |

**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 | | 08/20/2019 1215 | 2 | | |
| 3 | | | 4 | | |
| 5 | | | 6 | | |

Revised Date 051418 Rev. 2018.1

# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

**Client:** LT Environmental, Inc.

**Date/ Time Received:** 08/20/2019 12:50:00 PM

**Work Order #:** 634606

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

**Temperature Measuring device used : T-NM-007**

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

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

Analyst: PH Device/Lot#:

**Checklist completed by:** Elizabeth McClellan Date: 08/20/2019

**Checklist reviewed by:** Jessica Kramer Date: 08/21/2019