

June 28, 2019

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

**RE: Revised Remediation Work Plan
James Ranch Unit #10 Battery
Remediation Permit Numbers 2RP-3179, 2RP-3464, and 2RP-5243
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the New Mexico Oil Conservation Division (NMOCD) with this Revised Remediation Work Plan (Work Plan) for the James Ranch Unit #10 Battery (Site). The Site is located in Unit H, Section 1, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1).

This Work Plan summarizes the release history, assessment and remediation activities completed to date, and the proposed remedial actions to address residual soil impacts at the Site based on concerns from NMOCD and the Bureau of Land Management (BLM) and to comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018.

BACKGROUND

Of the three open Remediation Permits (RPs) at the Site, two of the RPs (2RP-3179 and 2RP-3464) occurred while the facility was operated by the previous operator; however, XTO is the current operator and is committed to addressing any releases that remain unresolved. Since the three releases occurred in the tank battery containment area, excavation and sampling activities were completed to address the three releases concurrently. RP Numbers 2RP-3179 and 2RP-3464 are included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and NMOCD effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with 19.15.29 NMAC. The release is categorized as a Tier III site in the Compliance Agreement, meaning remediation of the release began prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.



SITE HISTORY

Below is a chronology of activities related to the three open RPs:

- **July 29, 2015:** A coupling failed on the water transfer pump causing a produced water aboveground storage tank (AST) to overflow. Approximately 50 barrels (bbls) of produced water and 5 bbls of condensate were released within the earthen tank battery containment. Approximately 13 bbls of produced water and 2 bbls of condensate were recovered. The release affected approximately 1,000 square feet within the tank battery containment.
- **July 30, 2015:** The former operator reported the release to NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) and was assigned RP Number 2RP-3179 (Attachment 1).
- **December 14, 2015:** A coupling failed on the same water transfer pump, causing the pump to shut down and the produced water AST to overflow. Approximately 81 bbls of produced water were released within the tank battery containment. A small volume of the released fluid escaped the containment along the southwest corner but remained on the well pad. Approximately 40 bbls of produced water were recovered. The release affected approximately 1,550 square feet within the tank battery containment and on pad.
- **December 22, 2015:** The former operator reported the release to NMOCD on a Form C-141 and was assigned RP Number 2RP-3464 (Attachment 1).
- **Initial Site Characterization/Closure Criteria:** Utilizing applicable site-specific and/or regional data, the following NMOCD Table 1 Closure Criteria was applied to the RPs:
 - o Benzene: 10 milligrams per kilogram (mg/kg);
 - o Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX): 50 mg/kg;
 - o Total Petroleum Hydrocarbons (TPH): 100 mg/kg; and
 - o Chloride: 600 mg/kg chloride.
- **January 4, 2018:** LTE personnel inspected the Site to evaluate the release extents associated with 2RP-3179 and 2RP-3464. LTE personnel collected nine preliminary soil samples (SS01 through SS09) in and around the release extent at a depth of approximately 0.5 feet below ground surface (bgs) to assess the magnitude and lateral extent of soil impacts. The laboratory analytical results are presented on Figure 2 and summarized in Table 1. The laboratory analytical report is included in Attachment 2.
- **January 29, 2019:** An overload of fluids entered the facility due to an increase in production efficiency by the lease operator. The overload in fluids caused the crude





oil AST to overflow within the earthen tank battery containment. Approximately 9.8 bbls of crude oil were released. Approximately 7 bbls of crude oil were recovered.

- **February 8, 2019:** XTO reported the release to the NMOCD on a Form C-141 and was assigned RP Number 2RP-5243 (Attachment 1).
- Based on the laboratory analytical results for the preliminary soil samples and the subsequent January 2019 crude oil release (2RP-5243) in the same location, excavation of impacted soil appeared to be the most effective remedial approach.
- **February through March 2019:** LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by laboratory analytical results from the preliminary soil samples and the documented release extent for the recent January 2019 release. Composite soil samples SW01 through SW05 were collected from the sidewalls of the excavation from depths of approximately 1 foot to 4 feet bgs. No soil samples were submitted for laboratory analysis from the floor of the excavation based on elevated field screening results in the excavation floor at approximately 4 feet bgs. The excavation measured approximately 5,000 square feet in area. The horizontal extent of the excavation is presented on Figure 3. A total of approximately 740 cubic yards of impacted soil were removed from the excavation. The laboratory analytical results are presented on Figure 3 and summarized in Table 1 and the laboratory analytical report is included in Attachment 2.
- **April 2019:** ASTs and associated equipment moved from location.
- **March through April 2019:** Lateral and vertical delineation of remaining soil impacts was completed.

Potholes PH01 and PH02 were completed utilizing a track hoe to a maximum depth of 42 feet bgs. Boreholes BH01 through BH06 were completed utilizing a hollow stem auger (HSA) drill rig due to depth limitations of the track hoe and depth of soil impacts observed. Boreholes were completed to depths ranging from approximately 10 feet to 80 feet bgs. Based on field screening and laboratory analytical results from the potholes and boreholes, BTEX, TPH, and chloride impacts in soil appeared to be delineated vertically. The pothole and borehole locations are presented on Figure 4 and summarized in Table 1. The laboratory analytical reports are included in Attachment 2. Copies of pothole and borehole lithologic/soil sampling logs are included in Attachment 3.

- **April 9 through April 11, 2019:** Additional excavation activities to a depth of approximately 4 feet bgs were completed south and east of the former tank battery containment based on lateral delineation soil sampling results. Approximately 1,000 cubic yards of impacted soil was excavated within the release extent. The final excavation extent is depicted on Figure 3. Photographs from the excavation are included in Attachment 4.





- **April 12, 2019:** Installation of a 30-mil poly liner completed. The liner covered a surface area of approximately 11,230 square feet and extended up the sidewalls approximately 2 to 3 feet. The poly liner extent is depicted on Figure 4. A photograph depicting the installation of the liner is included in Attachment 4.
- **April 12, 2019:** LTE submitted a Proposed Remediation Work Plan to NMOCD for the Site.
- **April 24, 2019:** NMOCD responded, via email, to the Proposed Remediation Work Plan with comments.
- **April 26, 2019:** BLM responded, via email, to the Proposed Remediation Work Plan with comments.
- **April 29, 2019:** NMOCD provided, via email, the following guidance as to their minimal requirements for approval of future remedial actions for the Site based on information provided in the Proposed Remediation Work Plan:
 - *Actual depth to groundwater will need to be established, by installation of a monitor well. I would suggest completing it in a manner that will allow for potential long term monitoring. There may some data available that establishes gradient. If not, this will need to be established by the installation of other water well borings as necessary to establish gradient. The completed water well needs to be installed down gradient, and in very close proximity to the impacted battery site.*
 - *A more complete delineation of impact needs to be performed. OCD would request a minimum of two borings be installed in the battery area, in what would be the more highly impacted areas. Samples are to be obtained at five feet intervals throughout the delineation. The purpose is to have a more precise idea of the levels and volume of hydrocarbon impact that exist. Sampling for chloride will be required as well.*
 - *Based on data already obtained, a four feet excavation and liner installation will not be an acceptable remedial proposal for this site. A deeper excavation will likely be required, along with a proposed method for mitigating the deeper impact that may not be practicable to excavate. Of particular concern, is the lighter end hydrocarbons that have been determined to exist at significant depths.*
 - *I would expect this to potentially be a long term project, so if XTO needs to return the well to production, the battery will need to be rebuilt in a different area of the well pad. Allow for potential deep excavations and monitoring at the impacted site when deciding on position of a new battery, if that is what XTO chooses to do. BLM will need to be consulted if additional surface disturbance is required.*



A detailed description of the three releases and previous preliminary soil sampling, excavation, and delineation activities is included in the April 2019 Proposed Remediation Work Plan. The submittal of a revised remediation work plan is due June 28, 2019.

ADDITIONAL FIELD ACTIVITIES

Based on the NMOCD requests on April 29, 2019, LTE oversaw the installation of three soil borings to assess the magnitude and extent of vertical soil impacts beneath the former tank battery as well as downgradient of the release extent (south-southwest).

Vertical Delineation

On May 21 and 22, 2019, boreholes BH07 and BH08 were advanced with a track-mounted sonic drill rig to depths of approximately 60 feet and 74 feet bgs, respectively. Borehole BH07 was installed in the vicinity of the two releases related to RP Numbers 2RP-3179 and 2RP-3464. Borehole BH08 was installed in the vicinity of the release related to RP Number 2RP-5243. An LTE geologist logged and described soils continuously and screened soil every 5 feet for volatile aromatic hydrocarbons and chloride utilizing a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Boreholes BH07 and BH08 are depicted on Figure 4. Copies of the borehole lithologic/soil sampling logs are included in Attachment 3.

Soil samples for laboratory analysis 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 of Midland, Texas (Xenco) 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.

In general, laboratory analytical results for soil samples from borehole BH07 indicated:

- BTEX was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 18.7 mg/kg at approximately 30 feet bgs (BH07E);
- TPH was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 4,150 mg/kg at approximately 30 feet bgs (BH07E); and
- Chloride was detected at concentrations ranging from 10.2 mg/kg at approximately 60 feet bgs (BH07K) to 1,290 mg/kg at approximately 10 feet bgs (BH07A).





In general, laboratory analytical results for soil samples from borehole BH08 indicated:

- BTEX was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 91.2 mg/kg at approximately 25 feet bgs (BH08E);
- TPH was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 16,800 mg/kg at approximately 25 feet bgs (BH08E); and
- Chloride was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 1,960 mg/kg at approximately 15 feet bgs (BH08B).

Applicable laboratory analytical results related to boreholes BH07 and BH08 are depicted on Figure 4. Table 1 summarizes laboratory analytical results. Laboratory analytical results are included Attachment 2.

The two boreholes were properly abandoned utilizing hydrated bentonite chips to prevent the borehole to act as a conduit of potential surficial impacts to the deep subsurface.

Depth to Water Investigation

On May 22 and 23, 2019, LTE oversaw the installation of a third borehole (MW01) utilizing a track-mounted sonic drill rig to assess depth to groundwater outside of the release extent. Borehole MW01 was installed, approximately 27 feet south-southwest of the final excavation extent, to a depth of approximately 150 feet bgs. An LTE geologist logged and described soils continuously and screen soil every foot for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Borehole MW01 is depicted on Figure 4. A copy of the borehole lithologic/soil sampling log is included in Attachment 3.

Soil samples for laboratory analysis 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 °C under strict COC procedures to Xenco for analysis of BTEX, TPH-GRO, TPH-DRO, TPH-ORO, and chloride.

In general, laboratory analytical results for soil samples from borehole MW01 indicated:

- BTEX was detected at concentrations ranging from below the laboratory reporting limit at most depths to 0.0611 mg/kg at approximately 77 feet bgs (MW01BX);
- TPH was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 53.2 mg/kg at approximately 71 feet bgs (MW01BR); and
- Chloride was detected at concentrations ranging from below the laboratory reporting limit at multiple depths to 242 mg/kg at approximately 9 feet bgs (MW01H).

Based on field screen of soil samples within boreholes BH07 and BH08, soil impacts appeared to diminish at approximately 35 feet and 65 feet bgs, respectively. As a result, borehole MW01 was





advanced to approximately 150 feet bgs to assess for groundwater table conditions. The borehole was left open for over 72 hours to allow for potential slow infill of groundwater. After the 72-hour waiting period without observing groundwater, it was determined groundwater beneath the Site is greater than 150 feet. The borehole was properly abandoned utilizing hydrate bentonite chips. No other boreholes were advanced to investigate groundwater since it was determined groundwater was greater than 150 feet bgs.

Applicable laboratory analytical results related to borehole MW01 are depicted on Figure 4. Table 1 summarizes laboratory analytical results. Laboratory analytical results are included Attachment 2. A copy of the borehole lithologic/soil sampling log is included in Attachment 3.

REVISED SITE CHARACTERIZATION

Utilizing site-specific and regional data collected for the initial Proposed Remediation Work Plan and in response to NMOCD and BLM comments, the following section refines the site characterization as it relates to potential receptors in the vicinity of the releases, revised Closure Criteria, and potential exposure pathways.

Geology and Hydrology

Soil beneath the Site generally consisted of poorly graded sand underlain by poorly to moderately consolidated caliche. Silty sands and silts were observed beneath the caliche to a depth of approximately 74 feet bgs, where clay was observed. Pothole and borehole lithologic/soil sampling logs are included in Attachment 3. Although a shallow caliche layer less than 5 feet thick was observed, boreholes indicate unconsolidated sands, silts, and clays are present to 150 feet bgs. Conditions indicative of karst geology were not observed beneath the Site.

Based on a review of nearby water well data, depth to water was estimated at over 100 feet bgs. A review by BLM determined depth to water could be as shallow as 85 feet bgs (New Mexico Office of the State Engineer Well Permit #C-2492). In response to the April 29, 2019 NMOCD guidance email, a borehole (MW01) was installed to assess site-specific depth to groundwater. Borehole MW01 was advanced to approximately 150 feet bgs. Based on field observations of borehole MW01, depth to water appears to be greater than 150 feet beneath the Site. The lithologic/soil sampling log for borehole MW01 is included in Attachment 3.





Site Receptors

LTE assessed nearby receptors according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 NMAC. Assessment of potential nearby receptors was conducted through desktop reviews of topographic maps, Federal Emergency Management Administration (FEMA) Geographic Information System (GIS) maps, United States Geological Survey (USGS) GIS maps, and aerial photographs as well as conducting site-specific observations. Applicable receptors for the Site include the following:

- **Groundwater:** Initially, depth to groundwater at the Site was estimated to be greater than 100 feet bgs based on the nearest water well data. Based on observations made during the advancement of borehole MW01, depth to water appears to be greater than 150 feet bgs beneath the Site;
- **Lakebed, Sinkhole, and/or Playa:** There does not appear to be any lakebeds, sinkholes, or playas within 200 feet of the site;
- **Significant Watercourse:** The nearest continuously flowing water or significant watercourse is an unnamed dry wash located approximately 4,100 feet south of the Site;
- **Occupied Structures:** Occupied residences, schools, hospitals, institutions, and/or churches appear to be located at distance greater than 300 feet from the Site;
- **Wetlands:** Wetlands appears to be located at a distance greater than 300 feet from the Site;
- **Domestic/Stock Springs and Private Water Wells:** There does not appear to be any springs or private water wells within 500 feet of the Site;
- **Other Freshwater Springs or Water Wells:** There does not appear to be any other freshwater springs or water wells with 1,000 feet of the Site;
- **100-Year Floodplain:** The Site does not appear to be located within a 100-year floodplain; and
- **Unstable Geology:** Based on lithology observed in boreholes at the Site, unstable geological conditions, specifically karsts, do not appear present beneath the Site.

Revised Closure Criteria

The advancement of boreholes BH07, BH08, and MW01 following submittal of the initial Proposed Remediation Work Plan in April 2019 verified depth to groundwater was greater than 150 feet bgs and the absence of unstable geology, specifically karsts, and as such, the Closure Criteria has been revised.





Based on the revised receptors described above, the following NMOCD Table 1 Closure Criteria apply for the Site:

- Benzene: 10 mg/kg;
- BTEX: 50 mg/kg;
- TPH-GRO and TPH-DRO: 1,000 mg/kg
- Total TPH: 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

Exposure Pathways

Below is a summary of potential exposure pathways related to the three open RPs.

Surficial Soil/Root Zone

Soil within the top 4 feet of the ground surface within the release extents was excavated and disposed of at a permitted landfill. Soil in the vicinity of preliminary soil samples SS01 through SS09 and composite sidewall samples SW01 through SW05 were excavated based on field screening and laboratory analytical results.

Based on field screening and laboratory analytical results from final excavation composite sidewall soil samples SW06 through SW12, surficial soil does not appear to contain BTEX or TPH at concentrations exceeding the revised Closure Criteria and appear to be protective of human health and the environment. In addition, the absences of chloride concentrations exceeding 600 mg/kg within the root zone appears to be protective of future vegetation growth in applicable areas such as the adjacent pasture and meets the BLM's preferred chloride Closure Criteria of 600 mg/kg in the top 4 feet of soil. As such, the surficial soil/root zone exposure pathway appears incomplete at this time.

Subsurface Soil Leaching to Groundwater

Subsurface soil does not contain benzene at concentrations exceeding the Closure Criteria. Subsurface soil containing BTEX at concentrations exceeding the Closure Criteria appear to be limited in extent and are generally elevated due to the presence of total xylenes. Laboratory analytical results indicate BTEX concentrations exceeding the Closure Criteria range from 54.2 mg/kg in soil sample BH08D at approximately 22 feet bgs to 106 mg/kg in soil sample PH02 at approximately 20 feet bgs. The deepest BTEX concentration above the Closure Criteria was detected in soil sample PH02A at approximately 42 feet bgs.

Subsurface soil containing TPH-GRO and TPH-DRO or total TPH concentrations exceeding their applicable revised Closure Criteria has been observed from approximately 4 feet bgs in composite





floor sample FS01 (10,800 mg/kg and 11,000 mg/kg, respectively) to approximately 50 feet bgs in borehole sample BH08J (1,310 mg/kg and 1,310 mg/kg, respectively). The highest concentration of TPH-GRO and TPH-DRO and total TPH was detected in borehole soil sample BH08E at approximately 25 feet bgs with a concentration of 16,800 mg/kg for both constituents.

Subsurface soil at the Site does not contain chloride concentrations exceeding the revised Closure Criteria of 20,000 mg/kg. Chloride concentrations in soil exceeding 600 mg/kg are limited in extent and were generally observed from approximately 5 feet bgs (BH07 and BH08) to 20 feet bgs (BH08C), with one outlier at 35 feet bgs (BH01F).

With depth to groundwater located greater than 150 feet bgs, there appears to be over 100 feet of unimpacted soil between BTEX and TPH-impacted soil beneath the Site. Vertical migration of impacts appears limited due to the fine-grained soil, specifically silts and clay, observed below impacts. Subsurface investigations indicate the absence of karst features, which general provide a conduit to groundwater. A 30-mil poly liner was placed at approximately 4 feet bgs within the excavation extent, which reduces the flushing of subsurface soils from heavy rainfalls. Based on the limited exposure to rainfall flushing impacts to greater depths, the fine-grained soil beneath impacts and absence of karst conditions, and the distance impacts would have to migrate to reach groundwater (greater than 100 feet), the subsurface soil leaching to groundwater exposure pathway appears incomplete at this time.

Groundwater Ingestion

Based on observations from borehole MW01, depth to groundwater exceeds 150 feet bgs. In general, soil impacts exceeding revised Closure Criteria have been observed from ground surface to approximately 50 bgs. With depth to groundwater greater than 150 feet bgs beneath the Site, there appears to be over 100 feet of unimpacted soil between BTEX and TPH-impacted soil beneath the Site and the potential for groundwater to be impacted as it relates to the three open RPs appears to be low. As a result, the groundwater ingestion exposure pathway appears incomplete at this time.

PROPOSED REMEDIAL ACTIONS

Based on the revised site characterization completed above, XTO proposes the following remedial actions to address the releases associated with RP Numbers 2RP-3179, 2RP-3464, and 2RP-5243.

Gross Source Removal

Excavation and disposal of produced water and crude oil impacted soil from the top 4 feet will eliminate the dermal and ingestion by humans and wildlife exposure pathway and surficial soil





conditions will likely be more conducive for vegetation growth and health. In addition, the removal of surficial soil impacts will reduce the migration of impacts downward.

Surficial soil impacts have been remediated to 4 feet bgs as determined by field screening and laboratory analytical results for confirmation sidewall soil samples and delineation soil samples. Approximately 1,740 cubic yards of impacted soil was excavated and disposed of between February and April 2019. The removal of source impacts to-date appears to be an effective remedial approach for this Site in protecting human health and the environment.

Barrier Placement

Placement of an impervious liner is utilized to reduce and/or minimize vertical migration of residual impacts by limiting rainfall from seeping into the soil and flushing impacts downwards towards groundwater. The barrier also is utilized to minimize contact with left in place impacts to prevent dermal contact and/or ingestion by humans and/or wildlife as well as protect vegetation roots from contact and causing stress and/or death of vegetation.

A 30-mil poly liner was installed at the base of the excavation on April 12, 2019. The liner covered a surface area of approximately 11,230 square feet and extended up the sidewalls approximately 2 to 3 feet. This barrier appears to be an effective retardant for migration of residual BTEX and TPH impacts left in place below 4 feet bgs. Since groundwater is likely present at a depth greater than 150 feet, limited infiltration of surface water to the subsurface will likely not aid in the migration and leaching of residual impacts to groundwater before natural attenuation occurs. The poly liner will also support the future health of vegetation covering portions of the excavation extent. The installation of the poly liner appears to be an effective remedial approach in protecting human health and the environment.

Relocation and Integrity Assessment of Tank Battery

To minimize the potential of future releases in the vicinity of these three open RPs, XTO will construct their tank battery in a different location within the James Ranch Unit #10 well pad. In addition, XTO will evaluate the integrity of all equipment and components utilized in the construction of the tank battery. This assessment of equipment and components will reduce the likelihood of future releases due to faulty and/or worn equipment and/or components. The relocation and integrity assessment of the tank battery appears to be an effective preventative approach to protecting human health and the environment.

Natural Attenuation

Residual BTEX and TPH impacts in soil exceeding the revised Closure Criteria have been left in place from approximately 4 feet to 50 feet bgs. Impacts have been delineated vertically and laterally. Depth to groundwater appears to be greater than 150 feet and there is approximately





100 feet of soil in compliance with the revised Closure Criteria between impacts and groundwater. While some vertical migration is likely to occur, the presence of fine-grained soil in the non-impacted soil will retard the vertical migration of impacts downward. As impacts remain in the ground, natural attenuation will occur in the forms of biodegradation, volatilization, and chemical weathering. Based on the current and future planned use of the Site, specifically a well pad with an associate tank battery, natural attenuation of residual BTEX and TPH in subsurface soil appears to be an effective remedial approach to protecting human health and the environment.

CONCLUSIONS

Based on site-specific data generated during preliminary assessment, excavation, delineation, and additional assessment activities associated with RP Numbers 2RP-3179, 2RP-3464, and 2RP-5243, the following conclusions can be made:

- Approximately 1,740 cubic yards of impacted soil was excavated from the release extents. Th excavation extended to 4 feet bgs;
- A 30-mil poly liner was installed over the entire excavation footprint and beyond by 2 to 3 feet up the sidewalls;
- Based on field observations of borehole MW01, depth to water is greater than 150 feet beneath the Site.
- Based on the revised receptors described above, the following NMOCD Table 1 Closure Criteria was applied for the Site:
 - o Benzene: 10 mg/kg;
 - o BTEX: 50 mg/kg;
 - o TPH-GRO and TPH-DRO: 1,000 mg/kg
 - o Total TPH: 2,500 mg/kg; and
 - o Chloride: 20,000 mg/kg.
- Lateral delineation of soil impacts related to the three open RPs was determined by field screening and laboratory analytical results from confirmation sidewall soil samples SW06 through SW12 and soil samples from boreholes BH02, BH04, BH05, and BH06;
- Vertical delineation of soil impacts related to the three RPs was determined by the following:
 - o Subsurface soil does not contain benzene at concentrations exceeding the Closure Criteria;





- o The deepest BTEX concentration above the Closure Criteria was detected in soil sample PH02A at approximately 42 feet bgs;
- o The deepest TPH-GRO and TPH-DRO combined concentration above the Closure Criteria was detected in borehole soil sample BH08J at approximately 50 feet bgs;
- o Subsurface soil at the Site does not contain chloride concentrations exceeding the revised Closure Criteria of 20,000 mg/kg. Chloride concentrations in soil exceeding 600 mg/kg are limited in extent and were generally observed from approximately 5 feet bgs (BH07 and BH08) to 20 feet bgs (BH08C), with one outlier at 35 feet bgs (BH01F).
- All exposure pathways appear to be incomplete at this time;
- The following remedial actions appear to be protective of human health and the environment:
 - o The completed excavation activities, which included the removal of approximately 1,740 cubic yards of impacts soil to a depth of approximately 4 feet bgs;
 - o The installation of a 30-mil poly liner over the entire excavation extent to act as a barrier for contact and retardant of vertical migration of residual impacts in soil;
 - o Relocation and integrity assessment of all equipment and components of the tank battery; and
 - o Natural attenuation of residual BTEX and TPH impacts in subsurface soil.



LTE, on behalf of XTO, requests approval of this work plan and no further action for these releases. If you have any questions or comments, please do not hesitate to contact Mr. Daniel R. Moir at (432) 236-3549 or Ms. Ashley Ager at (970) 946-1093.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read "Daniel R. Moir".

Daniel R. Moir, P.G.
Senior Geologist

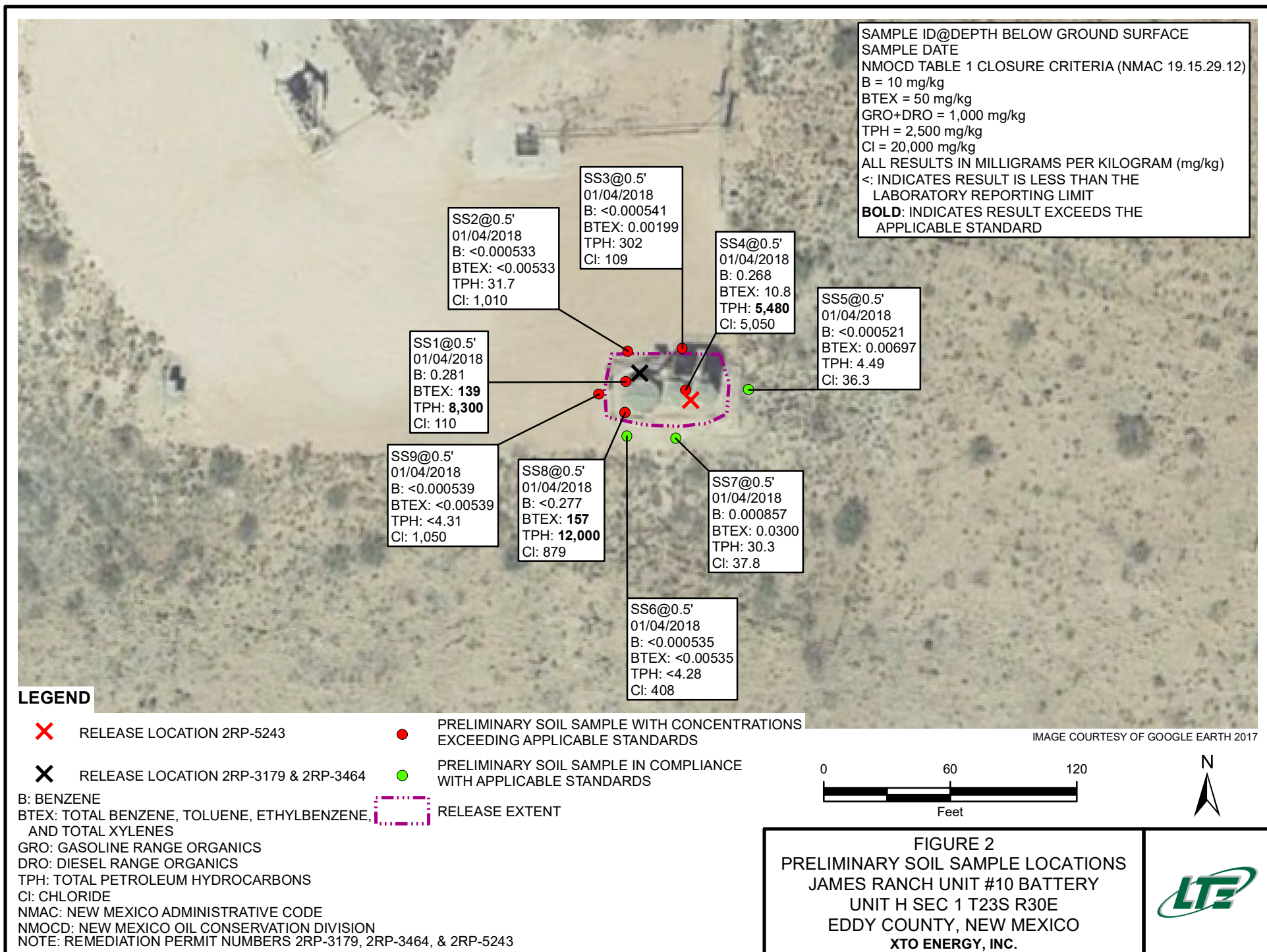
A handwritten signature in black ink, appearing to read "Ashley L. Ager".

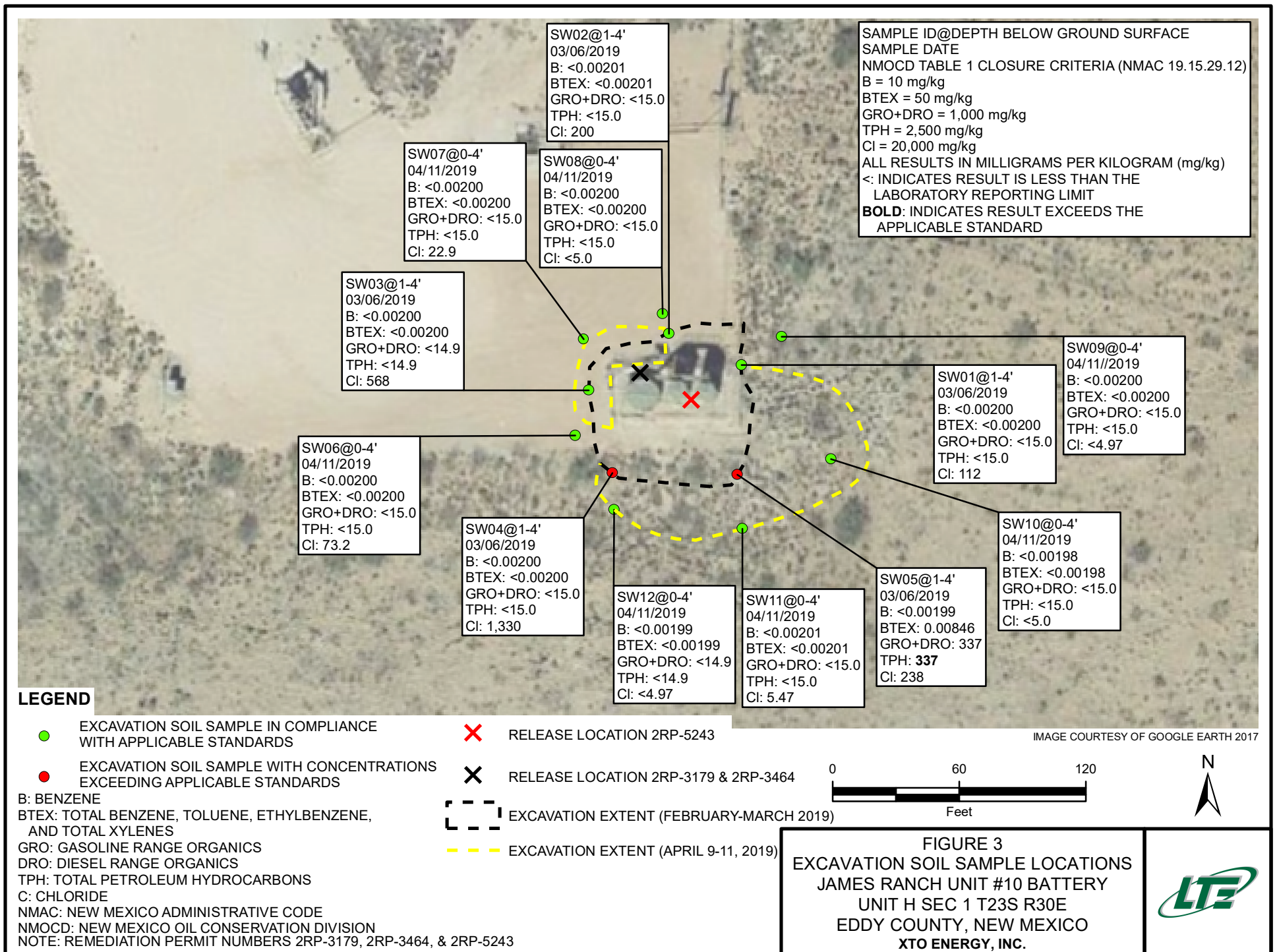
Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Bradford Billings, NMOCD
Robert Hamlet, NMOCD
Jim Amos, U.S. Bureau of Land Management

Attachments:

Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Figure 3 Excavation Soil Sample Locations
Figure 4 Delineation Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Initial/Final NMOCD Form C-141 (2RP-3179, 2RP-3464, and 2RP-5243)
Attachment 2 Laboratory Analytical Reports
Attachment 3 Lithologic/Soil Sampling Logs
Attachment 4 Photographic Log





SAMPLE ID@DEPTH BELOW GROUND SURFACE
 SAMPLE DATE
 NMOCD TABLE 1 CLOSURE CRITERIA (NMAC 19.15.29.12)
 B = 10 mg/kg
 BTEX = 50 mg/kg
 GRO+DRO = 1,000 mg/kg
 TPH = 2,500 mg/kg
 Cl = 20,000 mg/kg
 ALL RESULTS IN MILLIGRAMS PER KILOGRAM (mg/kg)
 <: INDICATES RESULT IS LESS THAN THE
 LABORATORY REPORTING LIMIT
BOLD: INDICATES RESULT EXCEEDS THE
 APPLICABLE STANDARD

BH05C@20'
 04/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 240

BH08@5'
 05/21/2019
 B: <0.402
 BTEX: 8.78
 GRO+DRO: **2,880**
 TPH: **2,880**
 Cl: 1,410

BH08E@25'
 05/21/2019
 B: <9.92
 BTEX: **91.2**
 GRO+DRO: **16,800**
 TPH: **16,800**
 Cl: 154

BH08F@30'
 05/21/2019
 B: <0.504
 BTEX: 17.7
 GRO+DRO: **5,250**
 TPH: **5,280**
 Cl: 42.3

BH05E@30'
 04/05/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 81.2

BH08K@55'
 05/21/2019
 B: <0.00201
 BTEX: 0.177
 GRO+DRO: 516
 TPH: 516
 Cl: 22.2

BH08O@74'
 05/22/2019
 B: <0.00199
 BTEX: <0.00199
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 9.51

BH03@5'
 04/05/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <14.9
 TPH: <14.9
 Cl: 1,000

BH03A@10'
 04/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 833

BH06@5'
 04/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 385

BH07@5'
 05/21/2019
 B: <0.504
 BTEX: 8.08
 GRO+DRO: **2,040**
 TPH: 2,040
 Cl: 1,080

BH07E@30'
 05/21/2019
 B: <0.498
 BTEX: 18.7
 GRO+DRO: **4,180**
 TPH: **4,180**
 Cl: 61.5

BH07F@35'
 05/21/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 22.4
 TPH: 22.4
 Cl: 38.4

BH06E@30'
 04/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 101

MW01@1'
 05/22/2019
 B: <0.00201
 BTEX: <0.00201
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 109

MW01D@5'
 05/22/2019
 B: <0.00198
 BTEX: <0.00198
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 79.2

MW01BG@60'
 05/23/2019
 B: <0.0204
 BTEX: <0.0204
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 19.0

MW01ES@150'
 06/04/2019
 B: <0.00100
 BTEX: <0.00100
 GRO+DRO: <49.8
 TPH: <49.8
 Cl: 18.4

PH01@6'
 03/05/2019
 B: <0.502
 BTEX: **88.9**
 GRO+DRO: **5,200**
 TPH: **5,220**
 Cl: 908

PH01A@25'
 03/07/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 35.0
 TPH: 35.0
 Cl: 264

BH01F@35'
 04/03/2019
 B: <0.499
 BTEX: **93.1**
 GRO+DRO: **9,530**
 TPH: **9,530**
 Cl: 2,090

PH02@20'
 03/07/2019
 B: <0.200
 BTEX: **106**
 GRO+DRO: **7,320**
 TPH: **7,340**
 Cl: 241

BH02B@15'
 04/04/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: 69.9

BH02O@80'
 04/04/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: 50.9
 TPH: 67.7
 Cl: <25.0

BH01O@80'
 04/05/2019
 B: <0.00200
 BTEX: <0.00200
 GRO+DRO: <15.0
 TPH: <15.0
 Cl: <25.0

PH02A@42'
 03/08/2019
 B: <0.402
 BTEX: **92.3**
 GRO+DRO: **6,120**
 TPH: **6,140**
 Cl: 474

LEGEND

- X RELEASE LOCATION 2RP-5243
- BOREHOLE SOIL SAMPLE LOCATION
- X RELEASE LOCATION 2RP-3179 & 2RP-3464
- RELEASE EXTENT
- POTHOLE SOIL SAMPLE LOCATION
- LINER EXTENT

B: BENZENE
 BTEX: TOTAL BENZENE, TOLUENE,
 ETHYLBENZENE, AND TOTAL XYLENES
 GRO: GASOLINE RANGE ORGANICS
 DRO: DIESEL RANGE ORGANICS
 TPH: TOTAL PETROLEUM HYDROCARBONS
 Cl: CHLORIDE
 NMAC: NEW MEXICO ADMINISTRATIVE CODE
 NMOCD: NEW MEXICO OIL
 CONSERVATION DIVISION
 NOTE: REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, & 2RP-5243

IMAGE COURTESY OF GOOGLE EARTH 2017

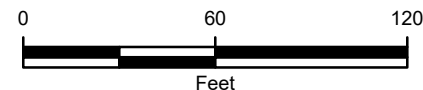


FIGURE 4
DELINEATION SOIL SAMPLE LOCATIONS
JAMES RANCH UNIT #10 BATTERY
UNIT H SEC 1 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	01/04/2018	0.281 B	10.8	2.96	125	139	3,140	4,960	201	8,100	8,300	110
SS2	0.5	01/04/2018	<0.000533	<0.00533	<0.000533	<0.00160	<0.00533	<0.107	23.6	8.10	23.6	31.7	1,010
SS3	0.5	01/04/2018	<0.000541	<0.00541	<0.000541	0.00199	0.00199	<0.108	259	43.3	259	302	109
SS4	0.5	01/04/2018	0.268 B	<1.16	0.481	10.1	10.8	1,810	3,510	160	5,320	5,480	5,050
SS5	0.5	01/04/2018	<0.000521	<0.00521	<0.000521	0.00697	0.00697	< .10	<4.17	4.49	<4.17	4.49	36.3
SS6	0.5	01/04/2018	<0.000535	<0.00535	<0.000535	<0.00161	<0.00535	<0.107	<4.28	<4.28	<4.28	<4.28	408
SS7	0.5	01/04/2018	0.000857	0.00873	0.00178	0.0186	0.0300	0.236 B	19.3	10.8	19.5	30.3	37.8
SS8	0.5	01/04/2018	<0.277	15.0	3.43	139	157	3,160	8,810	<222	12,000	12,000	879
SS9	0.5	01/04/2018	<0.000539	<0.00539	<0.000539	<0.00162	<0.00539	<0.108	<4.31	<4.31	<4.31	<4.31	1,050
SS-9B	1.5	04/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
SW-10	7.5	04/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	145
SW-11	7.5	04/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	719
SW-12	7.5	04/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	342
FS-14	1.5	04/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	290
FS01	4.0	02/15/2019	0.515	10.1	0.595	50.4	61.6	7,090	3,790	98.5	10,880	11,000	194
SW02	0-4	02/15/2019	4.28	37.5	19.7	159	220	1,860	2,030	34.6	3,890	3,920	447
PH01	6	03/05/2019	<0.502	4.34	5.28	79.3	88.9	3,110	2,090	17.9	5,200	5,220	908
SW01	1 - 4	03/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	112
SW02	1 - 4	03/06/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	200
SW03	1 - 4	03/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	568
SW04	1 - 4	03/06/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	1,330*
SW05	1 - 4	03/06/2019	<0.00199	<0.00199	<0.00199	0.00846	0.00846	20.5	316	<15.0	337	337	283*
PH01A	25	03/07/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	35.0	<14.9	35.0	35.0	264
PH02	20	03/07/2019	<0.200	9.81	11.8	84.5	106	4,140	3,180	21.7	7,320	7,340	241



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH02A	42	03/08/2019	<0.402	4.19	12.2	75.9	92.3	3,400	2,720	18.1	6,120	6,140	474
BH01F	35	04/03/2019	<0.499	9.90	11.6	71.6	93.1	6,030	3,500	<74.7	9,530	9,530	2,090
BH01O	80	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<25.0
BH02B	15	04/04/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	69.9
BH02O	80	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	50.9	16.8	50.9	67.7	<25.0
BH03	5	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	1,000
BH03A	10	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	833
BH04D	25	04/05/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	90.6
BH04I	50	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	26.0	<15.0	26.0	26.0	93.8
BH05C	20	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	240
BH05E	30	04/05/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	81.2
BH06	5	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	385
BH06E	30	04/05/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	101
SW06	0 - 4	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	73.2
SW07	0 - 4	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	22.9
SW08	0 - 4	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.0
SW09	0 - 4	04/11/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97*
SW10	0 - 4	04/11/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<5.0*
SW11	0 - 4	04/11/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	5.47*
SW12	0 - 4	04/11/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97*
BH07	5	05/21/2019	<0.504	<0.504	1.87	6.21	8.08	835	1200	<15.0	2,040	2,040	1,080
BH07A	10	05/21/2019	<0.499	<0.499	2.04	6.66	8.70	1050	1450	<15.0	2,500	2,500	1,290
BH07B	15	05/21/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	62.0	166	<15.0	228	228	521
BH07C	20	05/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	17.3	24.2	<15.0	41.5	41.5	324



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
BH07D	25	05/21/2019	0.0830	0.0412	0.636	1.40	2.16	251	335	<15.0	586	586	204
BH07E	30	05/21/2019	<0.498	0.610	4.28	13.8	18.7	1760	2420	<15.0	4,180	4,180	61.5
BH07F	35	05/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	22.4	<15.0	22.4	22.4	38.4
BH07G	40	05/21/2019	<0.00200	<0.00200	<0.00200	0.00651	0.00651	16.3	25.2	<15.0	41.5	41.5	48.2
BH07H	45	05/21/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	22.4
BH07I	50	05/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	11.9
BH07J	55	05/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	15.4
BH07K	60	05/21/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	10.2
BH08	5	05/21/2019	<0.402	<0.402	1.99	6.79	8.78	1240	1640	<15.0	2,880	2,880	1,410
BH08A	10	05/21/2019	<0.199	0.360	2.60	10.5	13.4	987	1340	<15.0	2,330	2,330	1,610
BH08B	15	05/21/2019	<0.402	0.496	3.17	13.9	17.6	1470	1530	<15.0	3,000	3,000	1,960
BH08C	20	05/21/2019	<0.200	0.295	2.90	12.5	15.7	834	1100	<15.0	1,930	1,930	1,380
BH08D	22	05/21/2019	<2.00	2.53	10.2	41.5	54.2	5330	4940	<74.7	10,300	10,300	343
BH08E	25	05/21/2019	<9.92	<9.92	19.0	72.2	91.2	9740	7060	<74.9	16,800	16,800	154
BH08F	30	05/21/2019	<0.504	0.638	3.38	13.7	17.7	2510	2740	28.1	5,250	5,280	42.3
BH08G	35	05/21/2019	<0.00199	<0.00199	<0.00199	0.00909	0.00909	18.0	110	<14.9	128	128	<4.96
BH08H	40	05/21/2019	<0.201	0.297	2.01	8.00	10.3	853	1510	16.7	2,360	2,380	<5.01
BH08I	45	05/21/2019	0.0539	<0.0497	0.569	1.93	2.55	565	1390	15.7	1,960	1,970	21.2
BH08J	50	05/21/2019	0.0884	0.113	0.163	3.44	3.81	437	871	<15.0	1,310	1,310	17.4
BH08K	55	05/21/2019	<0.00201	<0.00201	0.00931	0.168	0.177	109	407	<15.0	516	516	22.2
BH08L	60	05/21/2019	<0.0504	<0.0504	0.338	0.0554	0.393	425	460	<15.0	885	885	514
BH08M	65	05/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	13.5
BH08N	70	05/21/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	13.2
BH08O	74	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	9.51



TABLE 1
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JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01	1	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	109*
MW01A	2	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	107*
MW01B	3	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	112*
MW01C	4	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	125*
MW01D	5	05/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	79.2
MW01E	6	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	182
MW01F	7	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	196
MW01G	8	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	207
MW01H	9	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	242
MW01I	10	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	229
MW01J	11	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	59.7
MW01K	12	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	86.8
MW01L	13	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	99.2
MW01M	14	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	90.8
MW01N	15	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	97.1
MW01O	16	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	83.6
MW01P	17	05/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	74.8
MW01Q	18	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	231
MW01R	19	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	237
MW01S	20	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	134
MW01T	21	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	126
MW01U	22	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	127
MW01V	23	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	81.1
MW01W	24	05/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	116



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01X	25	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	50.3
MW01Y	26	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	52.1
MW01Z	27	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	42.9
MW01AA	28	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	29.5
MW01AB	29	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	56.1
MW01AC	30	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	33.7
MW01AD	31	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	35.3
MW01AE	32	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	32.9
MW01AF	33	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.05
MW01AG	34	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	27.0
MW01AH	35	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	33.9
MW01AI	36	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	52.0
MW01AJ	37	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	35.0
MW01AK	38	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	30.0
MW01AL	39	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	20.0
MW01AM	40	05/22/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	13.6
MW01AN	41	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	24.2
MW01AO	42	05/23/2019	<0.0187	<0.0187	<0.0187	<0.0187	<0.0187	<15.0	<15.0	<15.0	<15.0	<15.0	34.4
MW01AP	43	05/23/2019	<0.0201	<0.0201	<0.0201	<0.0201	<0.0201	<15.0	<15.0	<15.0	<15.0	<15.0	7.77
MW01AQ	44	05/23/2019	<0.0209	<0.0209	<0.0209	<0.0209	<0.0209	<15.0	<15.0	<15.0	<15.0	<15.0	35.7
MW01AR	45	05/23/2019	<0.0203	<0.0203	<0.0203	<0.0203	<0.0203	<15.0	<15.0	<15.0	<15.0	<15.0	29.9
MW01AS	46	05/23/2019	<0.0207	<0.0207	<0.0207	<0.0207	<0.0207	<15.0	<15.0	<15.0	<15.0	<15.0	27.8
MW01AT	47	05/23/2019	<0.0204	0.0285	<0.0204	<0.0204	0.0285	<15.0	<15.0	<15.0	<15.0	<15.0	12.7
MW01AU	48	05/23/2019	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<15.0	<15.0	<15.0	<15.0	<15.0	13.0



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01AV	49	05/23/2019	<0.0201	<0.0201	<0.0201	<0.0201	<0.0201	<15.0	<15.0	<15.0	<15.0	<15.0	19.7
MW01AW	50	05/23/2019	<0.0207	<0.0207	<0.0207	<0.0207	<0.0207	<14.9	<14.9	<14.9	<14.9	<14.9	21.5
MW01AX	51	05/23/2019	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<15.0	<15.0	<15.0	<15.0	<15.0	12.8
MW01AY	52	05/23/2019	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<15.0	<15.0	<15.0	<15.0	<15.0	1.37
MW01AZ	53	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	14.5
MW01BA	54	05/23/2019	<0.0209	<0.0209	<0.0209	<0.0209	<0.0209	<15.0	<15.0	<15.0	<15.0	<15.0	8.89
MW01BB	55	05/23/2019	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<15.0	<15.0	<15.0	<15.0	<15.0	9.37
MW01BC	56	05/23/2019	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<15.0	<15.0	<15.0	<15.0	<15.0	25.1
MW01BD	57	05/23/2019	<0.0201	<0.0201	<0.0201	<0.0201	<0.0201	<15.0	<15.0	<15.0	<15.0	<15.0	26.9
MW01BE	58	05/23/2019	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<15.0	<15.0	<15.0	<15.0	<15.0	13.6
MW01BF	59	05/23/2019	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<15.0	<15.0	<15.0	<15.0	<15.0	7.10
MW01BG	60	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	19.0
MW01BH	61	05/23/2019	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<15.0	<15.0	<15.0	<15.0	<15.0	18.9
MW01BI	62	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	15.7
MW01BJ	63	05/23/2019	<0.0205	<0.0205	<0.0205	<0.0205	<0.0205	<15.0	<15.0	<15.0	<15.0	<15.0	17.1
MW01BK	64	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	9.88
MW01BL	65	05/23/2019	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<15.0	<15.0	<15.0	<15.0	<15.0	9.86
MW01BM	66	05/23/2019	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<15.0	<15.0	<15.0	<15.0	<15.0	9.30
MW01BN	67	05/23/2019	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<15.0	<15.0	<15.0	<15.0	<15.0	12.9
MW01BO	68	05/23/2019	<0.0208	<0.0208	<0.0208	<0.0208	<0.0208	<15.0	<15.0	<15.0	<15.0	<15.0	15.3
MW01BP	69	05/23/2019	<0.0207	<0.0207	<0.0207	<0.0207	<0.0207	<15.0	<15.0	<15.0	<15.0	<15.0	8.35
MW01BQ	70	05/23/2019	<0.0202	0.0323	<0.0202	<0.0202	0.0323	<15.0	<15.0	<15.0	<15.0	<15.0	9.89
MW01BR	71	05/23/2019	<0.0201	0.0221	<0.0201	<0.0201	0.0221	<14.9	53.2	<14.9	53.2	53.2	6.34
MW01BS	72	05/23/2019	<0.0201	<0.0201	<0.0201	<0.0201	<0.0201	<15.0	<15.0	<15.0	<15.0	<15.0	8.31



TABLE 1
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JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01BT	73	05/23/2019	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<15.0	<15.0	<15.0	<15.0	<15.0	8.18
MW01BU	74	05/23/2019	<0.0199	<0.0199	<0.0199	<0.0199	<0.0199	<15.0	<15.0	<15.0	<15.0	<15.0	6.18
MW01BV	75	05/23/2019	<0.0201	0.0542	<0.0201	<0.0201	0.0542	<14.9	<14.9	<14.9	<14.9	<14.9	8.85
MW01BW	76	05/23/2019	<0.0199	0.0319	<0.0199	<0.0199	0.0319	<15.0	<15.0	<15.0	<15.0	<15.0	7.08
MW01BX	77	05/23/2019	<0.0204	0.0611	<0.0204	<0.0204	0.0611	<15.0	<15.0	<15.0	<15.0	<15.0	9.48
MW01BY	78	05/23/2019	<0.0205	0.0594	<0.0205	<0.0205	0.0594	<15.0	<15.0	<15.0	<15.0	<15.0	131
MW01BZ	79	05/23/2019	<0.0201	0.0443	<0.0201	<0.0201	0.0443	<15.0	<15.0	<15.0	<15.0	<15.0	105
MW01CA	80	05/23/2019	<0.0207	0.0415	<0.0207	<0.0207	0.0415	<15.0	<15.0	<15.0	<15.0	<15.0	53.0
MW01CB	81	05/23/2019	<0.0206	0.0432	<0.0206	<0.0206	0.0432	<15.0	<15.0	<15.0	<15.0	<15.0	6.23
MW01CC	82	05/23/2019	<0.0200	0.0220	<0.0200	<0.0200	0.0220	<15.0	<15.0	<15.0	<15.0	<15.0	5.16
MW01CD	83	05/23/2019	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<14.9	<14.9	<14.9	<14.9	<14.9	6.19
MW01CE	84	05/23/2019	<0.0204	0.0265	<0.0204	<0.0204	0.0265	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01CF	85	05/23/2019	<0.0202	0.0444	<0.0202	<0.0202	0.0444	<14.9	<14.9	<14.9	<14.9	<14.9	<5.00
MW01CG	86	05/23/2019	<0.0203	0.0385	<0.0203	<0.0203	0.0385	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01CH	87	05/23/2019	<0.0198	0.0297	<0.0198	<0.0198	0.0297	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01CI	88	05/23/2019	<0.0196	0.0333	<0.0196	<0.0196	0.0333	<15.0	<15.0	<15.0	<15.0	<15.0	6.30
MW01CJ	89	05/23/2019	<0.0197	0.0295	<0.0197	<0.0197	0.0295	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
MW01CK	90	05/23/2019	<0.0193	0.0270	<0.0193	<0.0193	0.0270	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
MW01CL	91	05/23/2019	<0.0205	0.0266	<0.0205	<0.0205	0.0266	<15.0	<15.0	<15.0	<15.0	<15.0	8.44
MW01CM	92	05/23/2019	<0.0195	0.0331	<0.0195	<0.0195	0.0331	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01CN	93	05/23/2019	<0.0202	0.0364	<0.0202	<0.0202	0.0364	<15.0	<15.0	<15.0	<15.0	<15.0	<4.95
MW01CO	94	05/23/2019	<0.0205	0.0328	<0.0205	<0.0205	0.0328	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
MW01CP	95	05/23/2019	<0.0200	0.0279	<0.0200	<0.0200	0.0279	<14.9	<14.9	<14.9	<14.9	<14.9	<4.95
MW01CQ	96	05/23/2019	<0.0200	0.0381	<0.0200	<0.0200	0.0381	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04



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REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01CR	97	05/23/2019	<0.0210	0.0252	<0.0210	<0.0210	0.0252	<15.0	<15.0	<15.0	<15.0	<15.0	9.86
MW01CS	98	05/23/2019	<0.0197	0.0354	<0.0197	<0.0197	0.0354	<15.0	<15.0	<15.0	<15.0	<15.0	8.96
MW01CT	99	05/23/2019	<0.0199	0.0358	<0.0199	<0.0199	0.0358	<15.0	<15.0	<15.0	<15.0	<15.0	11.3
MW01CU	100	05/23/2019	<0.0199	0.0278	<0.0199	<0.0199	0.0278	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99
MW01CV	101	05/23/2019	<0.0207	<0.0207	<0.0207	<0.0207	<0.0207	<15.0	<15.0	<15.0	<15.0	<15.0	5.16
MW01CW	102	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	20.9
MW01CX	103	05/23/2019	<0.0205	0.0308	<0.0205	<0.0205	0.0308	<15.0	<15.0	<15.0	<15.0	<15.0	10.8
MW01CY	104	05/23/2019	<0.0197	0.0315	<0.0197	<0.0197	0.0315	<15.0	<15.0	<15.0	<15.0	<15.0	6.70
MW01CZ	105	05/23/2019	<0.0200	0.0240	<0.0200	<0.0200	0.0240	<15.0	32.4	<15.0	32.4	32.4	<5.05
MW01DA	106	05/23/2019	<0.0201	0.0483	<0.0201	<0.0201	0.0483	<15.0	23.3	<15.0	23.3	23.3	5.50
MW01DB	107	05/23/2019	<0.0206	0.0268	<0.0206	<0.0206	0.0268	<15.0	<15.0	<15.0	<15.0	<15.0	6.74
MW01DC	108	05/23/2019	<0.0207	0.0290	<0.0207	<0.0207	0.0290	<14.9	<14.9	<14.9	<14.9	<14.9	17.8
MW01DD	109	05/23/2019	<0.0204	0.0347	<0.0204	<0.0204	0.0347	<15.0	<15.0	<15.0	<15.0	<15.0	23.0
MW01DE	110	05/23/2019	<0.0204	0.0346	<0.0204	<0.0204	0.0346	<15.0	<15.0	<15.0	<15.0	<15.0	13.6
MW01DF	111	05/23/2019	<0.0199	0.0318	<0.0199	<0.0199	0.0318	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01DG	112	05/23/2019	<0.0203	0.0305	<0.0203	<0.0203	0.0305	<15.0	<15.0	<15.0	<15.0	<15.0	60.6
MW01DH	113	05/23/2019	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00
MW01DI	114	05/23/2019	<0.0202	0.0323	<0.0202	<0.0202	0.0323	<14.9	<14.9	<14.9	<14.9	<14.9	<5.03
MW01DJ	115	05/23/2019	<0.0198	0.0437	<0.0198	<0.0198	0.0437	<15.0	<15.0	<15.0	<15.0	<15.0	10.9
MW01DK	116	05/23/2019	<0.0204	0.0367	<0.0204	<0.0204	0.0367	<14.9	<14.9	<14.9	<14.9	<14.9	6.49
MW01DL	117	05/23/2019	<0.0199	0.0259	<0.0199	<0.0199	0.0259	<15.0	<15.0	<15.0	<15.0	<15.0	8.50
MW01DM	118	05/29/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	11.1
MW01DN	119	05/29/2019	<0.00100	0.00106	<0.00100	<0.00100	0.00106	<49.7	<49.7	<49.7	<49.7	<49.7	13.8
MW01DO	120	05/29/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.6	<49.6	<49.6	<49.6	<49.6	7.11



TABLE 1
SOIL ANALYTICAL RESULTS

REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01DP	121	05/29/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<49.7	<49.7	<49.7	<49.7	<49.7	7.10
MW01DQ	122	05/29/2019	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<49.8	<49.8	<49.8	<49.8	<49.8	6.59
MW01DR	123	06/03/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.8	<49.8	<49.8	<49.8	<49.8	15.2
MW01DS	124	06/03/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.8	<49.8	<49.8	<49.8	<49.8	11.0
MW01DT	125	06/03/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.5	<49.5	<49.5	<49.5	<49.5	19.9
MW01DU	126	06/03/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.9	<49.9	<49.9	<49.9	<49.9	53.3
MW01DV	127	06/03/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.7	<49.7	<49.7	<49.7	<49.7	37.4
MW01DW	128	06/03/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.8	<49.8	<49.8	<49.8	<49.8	54.7
MW01DX	129	06/03/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.7	<49.7	<49.7	<49.7	<49.7	30.3
MW01DY	130	06/03/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.7	<49.7	<49.7	<49.7	<49.7	18.3
MW01DZ	131	06/03/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.7	<49.7	<49.7	<49.7	<49.7	17.4
MW01EA	132	06/03/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.8	<49.8	<49.8	<49.8	<49.8	19.5
MW01EB	133	06/03/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.7	<49.7	<49.7	<49.7	<49.7	30.4
MW01EC	134	06/03/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.8	<49.8	<49.8	<49.8	<49.8	34.2
MW01ED	135	06/03/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.6	<49.6	<49.6	<49.6	<49.6	11.7
MW01EE	136	06/03/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.9	<49.9	<49.9	<49.9	<49.9	12.9
MW01EF	137	06/03/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.7	<49.7	<49.7	<49.7	<49.7	10.9
MW01EG	138	06/04/2019	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	<49.9	<49.9	<49.9	<49.9	<49.9	12.8
MW01EH	139	06/04/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.8	<49.8	<49.8	<49.8	<49.8	14.6
MW01EI	140	06/04/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<49.7	<49.7	<49.7	<49.7	<49.7	11.9
MW01EJ	141	06/04/2019	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	<49.5	<49.5	<49.5	<49.5	<49.5	<5.00
MW01EK	142	06/04/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.9	<49.9	<49.9	<49.9	<49.9	15.8
MW01EL	143	06/04/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<49.7	<49.7	<49.7	<49.7	<49.7	16.9
MW01EM	144	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.5	<49.5	<49.5	<49.5	<49.5	7.25



**TABLE 1
SOIL ANALYTICAL RESULTS**

**REVISED REMEDIATION WORK PLAN
JAMES RANCH UNIT #10 BATTERY
REMEDIATION PERMIT NUMBERS 2RP-3179, 2RP-3464, and 2RP-5243
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)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
MW01EN	145	06/04/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.5	<49.5	<49.5	<49.5	<49.5	12.8
MW01EO	146	06/04/2019	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	<49.9	<49.9	<49.9	<49.9	<49.9	28.1
MW01EP	147	06/04/2019	<0.000990	<0.000990	<0.000990	<0.000990	<0.000990	<50.0	<50.0	<50.0	<50.0	<50.0	15.8
MW01EQ	148	06/04/2019	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<49.9	<49.9	<49.9	<49.9	<49.9	13.3
MW01ER	149	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<50.0	<50.0	<50.0	<50.0	<50.0	15.8
MW01ES	150	06/04/2019	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<49.8	<49.8	<49.8	<49.8	<49.8	18.4
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000

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

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg





District I
1625 N. French Dr., Hobbs, NM 88240
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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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NAB1521257588 **2100737** **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: JRU-10	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-23075	

LOCATION OF RELEASE

Unit Letter H	Section 1	Township 23S	Range 30E	Feet from the 1980	North/South Line North	Feet from the 660	East/West Line East	County Eddy

Latitude N 32.335568° Longitude W 103.827592°

NATURE OF RELEASE

Type of Release: Produced water and condensate	Volume of Release: 50 bbls. PW and 5 bbls. condensate	Volume Recovered: 13 bbls. PW and 2 bbls. condensate
Source of Release: Produced water tank	Date and Hour of Occurrence: 7/29/15, time unknown	Date and Hour of Discovery: 7/29/15 at approximately 8:30 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson, and Jim Amos	
By Whom? Tony Savoie	Date and Hour 7/29/15, first attempt at 1:51 p.m. confirmed at 6:14 p.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

NM OIL CONSERVATION

ARTESIA DISTRICT

JUL 30 2015

RECEIVED

Describe Cause of Problem and Remedial Action Taken.*

A coupling on the water transfer pump failed causing the tank to overflow. The coupling was replaced the day of the release.

Describe Area Affected and Cleanup Action Taken.*

The spill impacted about 1000 sq.ft. inside the earthen containment around the Oil and PW tanks. All of the free standing fluid was recovered with a vacuum truck.

The spill area will be cleaned up in accordance to the NMOCED and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCED 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 NMOCED marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCED 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.

Signature: <u>Tony Savoie</u>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by Environmental Specialist: <u>Hu</u>	
Title: Waste Management and Remediation Specialist	Approval Date: <u>7/31/15</u>	Expiration Date: <u>N/A</u>
E-mail Address: <u>tasavoie@busspet.com</u>	Conditions of Approval:	
Date: <u>7/30/15</u> Phone: 432-556-8730	Attached ☐	

* Attach Additional Sheets If Necessary

mediation per O.C.D. Rules & Guidelines
SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 9/31/15

2RP-3179

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	
District RP	2RP-3179
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3179
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.335568 Longitude -103.827592
(NAD 83 in decimal degrees to 5 decimal places)

Site Name JRU-10	Site Type Exploration and Production
Date Release Discovered 07/29/15	API# (if applicable) 30-015-23075

Unit Letter	Section	Township	Range	County
H	1	23S	30E	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 50	Volume Recovered (bbls) 13
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☒ Condensate	Volume Released (bbls) 5	Volume Recovered (bbls) 2
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A coupling on the water transfer pump failed causing the tank to overflow. The coupling was replaced the day of the release. The spill impacted about 1000 sq.ft. inside the earthen containment around the Oil and produced water tanks. All of the free standing fluid was recovered with a vacuum truck.

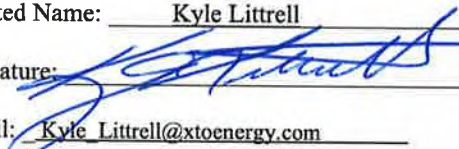
State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3179
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Tony Savoie to Mike Bratcher/Heather Patterson (NMOCD), and Jim Amos (BLM) on 7/29/2015.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Coordinator</u>
Signature: 	Date: <u>4/12/2019</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	2RP-3179
Facility ID	
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?	<u> >150 </u> (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: <i>Each of the following items must be included in the report.</i> ☒ 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.

Incident ID	
District RP	2RP-3179
Facility ID	
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: 06/28/2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-3179
Facility ID	
Application ID	

Remediation Plan

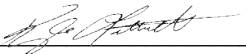
Remediation Plan Checklist: *Each of the following items must be included in the plan.*

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E SupervisorSignature:  Date: 06/28/2019email: 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: _____

**NM OIL CONSERVATION
ARTESIA DISTRICT**

DEC 22 2015

Form C-141
Revised August 8, 2011

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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

NA81535754357		OPERATOR	☒ Initial Report	☐ Final Report
Name of Company: BOPCO, L.P. <i>2100737</i>		Contact: Amy Ruth		
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Telephone No. 575-887-7329		
Facility Name: James Ranch Unit #10 Battery		Facility Type: Exploration and Production		
Surface Owner: Federal		Mineral Owner: Federal		API No. 30-015-23075

LOCATION OF RELEASE

Unit Letter H	Section 1	Township 23S	Range 30E	Feet from the 1980	North/South Line North	Feet from the 660	East/West Line East	County Eddy

Latitude 32.335560° Longitude -103.827584°

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 81 bbls	Volume Recovered 40 bbls
Source of Release Tank Overflow	Date and Hour of Occurrence 12/14/2015 time unknown	Date and Hour of Discovery 12/14/2015 11:15 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher/Heather Patterson (NMOCD), Jim Amos (BLM)	
By Whom? Amy Ruth	Date and Hour 12/14/2015 4:52 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* Coupling on water transfer pump failed and pump shut down. Produced water tank filled and overflowed into the battery earthen containment. The pump was repaired.		
Describe Area Affected and Cleanup Action Taken.* The leak affected 1550 ft ² of well pad within the tank containment and standing fluids were recovered.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.		

Signature: <i>[Signature]</i>		OIL CONSERVATION DIVISION	
Printed Name: Amy C. Ruth		Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Remediation Specialist		Approval Date: 12/23/15	Expiration Date: N/A
E-mail Address: AC.Ruth@basspet.com		Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐	
Date: 12/22/2015	Phone: 432-661-0571	SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 1/24/16

2RP-3464

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
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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	
District RP	2RP-3464
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-3464
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.335560 Longitude -103.827584
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #10 Battery	Site Type Exploration and Production
Date Release Discovered 12/14/15	API# (if applicable) 30-015-23075

Unit Letter	Section	Township	Range	County
H	1	23S	30E	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)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 81	Volume Recovered (bbls) 40
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☒ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Coupling on water transfer pump failed and pump shut down. Produced water tank filled and overflowed into the battery earthen containment. The pump was repaired. The leak affected 1550 ft² of well pad within the tank containment and standing fluids were recovered.

Fluids remained within the containment with exception of the southwest corner, though what little escaped remained on the well pad.

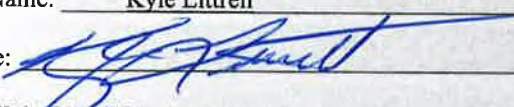
State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-3464
Facility ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The release was greater than 25 bbls.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, immediate notice was given by Amy Ruth to Mike Bratcher/ Heather Patterson (NMOCD), and Jim Amos (BLM) on 12/14/15.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Coordinator</u>
Signature: 	Date: <u>4/12/2019</u>
email: <u>Kyle_Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	2RP-3464
Facility ID	
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?	<u>>150</u> (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.

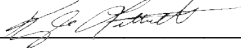
Characterization Report Checklist: <i>Each of the following items must be included in the report.</i> ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells. ☒ Field data ☒ Data table of soil contaminant concentration data ☒ Depth to water 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.

Incident ID	
District RP	2RP-3464
Facility ID	
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: 06/28/2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-3464
Facility ID	
Application ID	

Remediation Plan

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 06/28/2019

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: _____

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	NAB1904653072
District RP	2RP-5243
Facility ID	
Application ID	pAB1904652533

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-5243
Contact mailing address 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.335540 Longitude -103.827513
(NAD 83 in decimal degrees to 5 decimal places)

Site Name James Ranch Unit #10 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 01/29/19	API# (if applicable) 30-015-23075

Unit Letter	Section	Township	Range	County
H	1	23S	30E	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) 9.8	Volume Recovered (bbls) 7
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

Just prior to unloading the tanks by oil haulers, an overload of fluids enter the facility and overran the oil tank into the earthen berm. This was due to increased production efficiency by the lease operator and the subsequent unloading of the well into the facility. A vacuum truck recovered free standing fluids and the battery is being evaluated for upgrades. An environmental contractor has been retained to assist with remediation efforts.

Incident ID	
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Application ID	

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

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.	
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Printed Name: <u>Kyle Littrell</u>	Title: <u>SH&E Coordinator</u>
Signature: 	Date: <u>4/12/2019</u>
email: <u>Kyle.Littrell@xtoenergy.com</u>	Telephone: <u>432-221-7331</u>
<u>OCD Only</u>	
Received by: _____	Date: _____

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Site Assessment/Characterization

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What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>150</u> (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
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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: <i>Each of the following items must be included in the report.</i> ☒ 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

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Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 06/28/2019

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

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	2RP-5243
Facility ID	
Application ID	

Remediation Plan

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

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- ☒ 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.

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Printed Name: Kyle Littrell Title: SH&E SupervisorSignature:  Date: 06/28/2019email: 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: _____



Analytical Report 615063

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-10

012918003

20-FEB-19

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



20-FEB-19

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

Reference: XENCO Report No(s): **615063**
JRU-10
Project Address: Delaware Basin

Adrian Baker:

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) 615063. 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. 615063 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
Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 615063



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	02-15-19 15:30	4 ft	615063-001
SW02	S	02-15-19 15:40	0 - 4 ft	615063-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU-10*

Project ID: 012918003
Work Order Number(s): 615063

Report Date: 20-FEB-19
Date Received: 02/19/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3079752 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 615063-002, 615063-001.

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

Batch: LBA-3079763 Inorganic Anions by EPA 300

Lab Sample ID 615063-001 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: 615063-001, -002.

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



Certificate of Analysis Summary 615063

LT Environmental, Inc., Arvada, CO

Project Name: JRU-10



Project Id: 012918003
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Feb-19-19 04:30 pm
Report Date: 20-FEB-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	615063-001	615063-002				
	Field Id:	FS01	SW02				
	Depth:	4- ft	0-4 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Feb-15-19 15:30	Feb-15-19 15:40				
BTEX by EPA 8021B	Extracted:	Feb-19-19 16:45	Feb-19-19 16:45				
	Analyzed:	Feb-20-19 11:38	Feb-20-19 11:57				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		4.28 0.402	0.515 0.399				
Toluene		37.5 0.402	10.1 0.399				
Ethylbenzene		19.7 0.402	0.595 0.399				
m,p-Xylenes		141 0.803	39.7 0.798				
o-Xylene		17.9 0.402	10.7 0.399				
Total Xylenes		159 0.402	50.4 0.399				
Total BTEX		220 0.402	61.6 0.399				
Inorganic Anions by EPA 300	Extracted:	Feb-20-19 09:00	Feb-20-19 09:00				
	Analyzed:	Feb-20-19 10:04	Feb-20-19 10:22				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		447 4.95	194 4.99				
TPH by SW8015 Mod	Extracted:	Feb-19-19 17:00	Feb-19-19 17:00				
	Analyzed:	Feb-20-19 07:15	Feb-19-19 20:54				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		7090 74.9	1860 14.9				
Diesel Range Organics (DRO)		3790 74.9	2030 14.9				
Motor Oil Range Hydrocarbons (MRO)		98.5 74.9	34.6 14.9				
Total TPH		11000 74.9	3920 14.9				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 615063



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **FS01**
Lab Sample Id: 615063-001

Matrix: Soil
Date Collected: 02.15.19 15.30

Date Received: 02.19.19 16.30
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079763

Date Prep: 02.20.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	447	4.95	mg/kg	02.20.19 10.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3079727

Date Prep: 02.19.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	7090	74.9	mg/kg	02.20.19 07.15		5
Diesel Range Organics (DRO)	C10C28DRO	3790	74.9	mg/kg	02.20.19 07.15		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	98.5	74.9	mg/kg	02.20.19 07.15		5
Total TPH	PHC635	11000	74.9	mg/kg	02.20.19 07.15		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	124	%	70-135	02.20.19 07.15		
o-Terphenyl	84-15-1	122	%	70-135	02.20.19 07.15		



Certificate of Analytical Results 615063



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **FS01**
Lab Sample Id: 615063-001

Matrix: Soil
Date Collected: 02.15.19 15.30

Date Received: 02.19.19 16.30
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3079752

Date Prep: 02.19.19 16.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	4.28	0.402	mg/kg	02.20.19 11.38		200
Toluene	108-88-3	37.5	0.402	mg/kg	02.20.19 11.38		200
Ethylbenzene	100-41-4	19.7	0.402	mg/kg	02.20.19 11.38		200
m,p-Xylenes	179601-23-1	141	0.803	mg/kg	02.20.19 11.38		200
o-Xylene	95-47-6	17.9	0.402	mg/kg	02.20.19 11.38		200
Total Xylenes	1330-20-7	159	0.402	mg/kg	02.20.19 11.38		200
Total BTEX		220	0.402	mg/kg	02.20.19 11.38		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	170	%	70-130	02.20.19 11.38	**	
1,4-Difluorobenzene	540-36-3	118	%	70-130	02.20.19 11.38		



Certificate of Analytical Results 615063



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **SW02** Matrix: Soil Date Received: 02.19.19 16.30
Lab Sample Id: 615063-002 Date Collected: 02.15.19 15.40 Sample Depth: 0 - 4 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 02.20.19 09.00 Basis: Wet Weight
Seq Number: 3079763

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	194	4.99	mg/kg	02.20.19 10.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 02.19.19 17.00 Basis: Wet Weight
Seq Number: 3079727

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1860	14.9	mg/kg	02.19.19 20.54		1
Diesel Range Organics (DRO)	C10C28DRO	2030	14.9	mg/kg	02.19.19 20.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	34.6	14.9	mg/kg	02.19.19 20.54		1
Total TPH	PHC635	3920	14.9	mg/kg	02.19.19 20.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	02.19.19 20.54	
o-Terphenyl	84-15-1	111	%	70-135	02.19.19 20.54	



Certificate of Analytical Results 615063



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **SW02**
Lab Sample Id: 615063-002

Matrix: Soil
Date Collected: 02.15.19 15.40

Date Received: 02.19.19 16.30
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3079752

Date Prep: 02.19.19 16.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.515	0.399	mg/kg	02.20.19 11.57		200
Toluene	108-88-3	10.1	0.399	mg/kg	02.20.19 11.57		200
Ethylbenzene	100-41-4	0.595	0.399	mg/kg	02.20.19 11.57		200
m,p-Xylenes	179601-23-1	39.7	0.798	mg/kg	02.20.19 11.57		200
o-Xylene	95-47-6	10.7	0.399	mg/kg	02.20.19 11.57		200
Total Xylenes	1330-20-7	50.4	0.399	mg/kg	02.20.19 11.57		200
Total BTEX		61.6	0.399	mg/kg	02.20.19 11.57		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	133	%	70-130	02.20.19 11.57	**	
1,4-Difluorobenzene	540-36-3	110	%	70-130	02.20.19 11.57		

- 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 615063

LT Environmental, Inc.

JRU-10

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079763

MB Sample Id: 7672112-1-BLK

Matrix: Solid

LCS Sample Id: 7672112-1-BKS

Prep Method: E300P

Date Prep: 02.20.19

LCSD Sample Id: 7672112-1-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	245	98	252	101	90-110	3	20	mg/kg	02.20.19 09:23	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079763

Parent Sample Id: 614867-001

Matrix: Soil

MS Sample Id: 614867-001 S

Prep Method: E300P

Date Prep: 02.20.19

MSD Sample Id: 614867-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3870	250	4410	216	4480	244	90-110	2	20	mg/kg	02.20.19 11:40	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3079763

Parent Sample Id: 615063-001

Matrix: Soil

MS Sample Id: 615063-001 S

Prep Method: E300P

Date Prep: 02.20.19

MSD Sample Id: 615063-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	447	248	663	87	666	88	90-110	0	20	mg/kg	02.20.19 10:10	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3079727

MB Sample Id: 7672124-1-BLK

Matrix: Solid

LCS Sample Id: 7672124-1-BKS

Prep Method: TX1005P

Date Prep: 02.19.19

LCSD Sample Id: 7672124-1-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	905	91	947	95	70-135	5	20	mg/kg	02.19.19 12:43	
Diesel Range Organics (DRO)	<8.13	1000	902	90	933	93	70-135	3	20	mg/kg	02.19.19 12:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		118		123		70-135	%	02.19.19 12:43
o-Terphenyl	97		115		119		70-135	%	02.19.19 12:43

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

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

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

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



QC Summary 615063

LT Environmental, Inc.

JRU-10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3079727

Parent Sample Id: 614850-021

Matrix: Soil

MS Sample Id: 614850-021 S

Prep Method: TX1005P

Date Prep: 02.19.19

MSD Sample Id: 614850-021 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)	<7.99	998	964	97	975	98	70-135	1	20	mg/kg	02.19.19 13:42	
Diesel Range Organics (DRO)	<8.11	998	972	97	993	99	70-135	2	20	mg/kg	02.19.19 13:42	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		121		70-135	%	02.19.19 13:42
o-Terphenyl	114		114		70-135	%	02.19.19 13:42

Analytical Method: BTEX by EPA 8021B

Seq Number: 3079752

MB Sample Id: 7672139-1-BLK

Matrix: Solid

LCS Sample Id: 7672139-1-BKS

Prep Method: SW5030B

Date Prep: 02.19.19

LCSD Sample Id: 7672139-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000388	0.101	0.124	123	0.124	124	70-130	0	35	mg/kg	02.20.19 03:09	
Toluene	<0.000459	0.101	0.106	105	0.105	105	70-130	1	35	mg/kg	02.20.19 03:09	
Ethylbenzene	<0.000569	0.101	0.0993	98	0.0987	99	70-130	1	35	mg/kg	02.20.19 03:09	
m,p-Xylenes	<0.00102	0.202	0.197	98	0.196	98	70-130	1	35	mg/kg	02.20.19 03:09	
o-Xylene	<0.000347	0.101	0.0988	98	0.0984	98	70-130	0	35	mg/kg	02.20.19 03:09	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		111		111		70-130	%	02.20.19 03:09
4-Bromofluorobenzene	93		100		98		70-130	%	02.20.19 03:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3079752

Parent Sample Id: 614584-002

Matrix: Soil

MS Sample Id: 614584-002 S

Prep Method: SW5030B

Date Prep: 02.19.19

MSD Sample Id: 614584-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.112	112	0.115	115	70-130	3	35	mg/kg	02.20.19 03:47	
Toluene	<0.000456	0.100	0.0955	96	0.0973	97	70-130	2	35	mg/kg	02.20.19 03:47	
Ethylbenzene	<0.000565	0.100	0.0859	86	0.0887	89	70-130	3	35	mg/kg	02.20.19 03:47	
m,p-Xylenes	<0.00101	0.200	0.171	86	0.176	88	70-130	3	35	mg/kg	02.20.19 03:47	
o-Xylene	<0.000344	0.100	0.0873	87	0.0896	90	70-130	3	35	mg/kg	02.20.19 03:47	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		112		70-130	%	02.20.19 03:47
4-Bromofluorobenzene	104		103		70-130	%	02.20.19 03:47

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

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

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

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

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
Phoenix AZ (480-355-0900) Atlanta GA (770) 449-8900 Tampa FL (813) 992-7550

Work Order No: 015003

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-880-0000)

Project Manager:		Adrian Baker		Bill to: (if different)		Kyle Little	
Company Name:		LT Environmental, Inc., Permian office		Company Name:		XT0 - Energy	
Address:		3300 North A Street		Address:			
City, State ZIP:		Midland, TX 79705		City, State ZIP:		Corlsbad NM	
Phone:		432.704.5178		Email:		rwu@ltenv.com	

Program: UST/PST ☐ RP ☐ Rowfields ☐ C ☐ perfund ☐ State of Project:	
Reporting Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

www.xenico.com Page of /

Project Name:	JRU-10	Turn Around	ANALYSIS REQUEST						Work Order Notes
Project Number:	012918003	Routine ☐							
P.O. Number:	ZRP-3179 ZRP-3164	Rush: Yes ☒ No							
Sampler's Name:	Robert McAffee	Due Date: 02/14/19							

SAMPLE RECEIPT		Temp Blank:	Yes	No	Yes	No
Temperature (°C):	2.4/2.3					
Received Intact:	Yes	No				
Cooler Custody Seals:	Yes	No	N/A			
Sample Custody Seals:	Yes	No	N/A			
		Correction Factor:				
		Total Containers:				

Thermometer ID: B8

Correction Factor: -0.1

Total Containers: 8015)

A 8021)

EPA 300.0)

TAT starts the day received by the

[illegible]

Total 200.7 / 6010		200.8 / 6020:		8RCRA 13PPM Texas 11		Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed				TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U			
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)	
1 <i>Paul M. [Signature]</i>		1 <i>Thomas P. [Signature]</i>		02/13/19		2 <i>[Signature]</i>	
3		4		4		4 <i>[Signature]</i>	
5		6		6		6 <i>[Signature]</i>	
				Received by: (Signature)		Date/Time	
				<i>[Signature]</i>		2/19/19 1030	

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Revised Date 05/14/18 Rev
774 9803 0803



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 02/19/2019 04:30:00 PM

Work Order #: 615063

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)?	2.3
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 02/19/2019

Checklist reviewed by:

Jessica Kramer

Date: 02/20/2019

Analytical Report 616897

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 10

08-MAR-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



08-MAR-19

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

Reference: XENCO Report No(s): **616897**
JRU 10
Project Address: Delaware Basin

Adrian Baker:

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) 616897. 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. 616897 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
Project Assistant

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

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



Sample Cross Reference 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	03-06-19 11:50	1 - 4 ft	616897-001
SW02	S	03-06-19 11:00	1 - 4 ft	616897-002
SW03	S	03-06-19 11:10	1 - 4 ft	616897-003
SW04	S	03-06-19 11:30	1 - 4 ft	616897-004
SW05	S	03-06-19 11:30	1 - 4 ft	616897-005



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID:

Work Order Number(s): 616897

Report Date: 08-MAR-19

Date Received: 03/07/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081570 BTEX by EPA 8021B

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



Certificate of Analysis Summary 616897

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:36 am

Report Date: 08-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	616897-001	616897-002	616897-003	616897-004	616897-005	
	<i>Field Id:</i>	SW01	SW02	SW03	SW04	SW05	
	<i>Depth:</i>	1-4 ft	1-4 ft	1-4 ft	1-4 ft	1-4 ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Mar-06-19 11:50	Mar-06-19 11:00	Mar-06-19 11:10	Mar-06-19 11:30	Mar-06-19 11:30	
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-07-19 12:00	Mar-07-19 12:00	Mar-07-19 12:00	Mar-07-19 12:00	Mar-07-19 12:00	
	<i>Analyzed:</i>	Mar-08-19 02:33	Mar-08-19 02:52	Mar-08-19 03:11	Mar-08-19 03:30	Mar-08-19 03:49	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00400 0.00400	<0.00401 0.00401	<0.00398 0.00398	
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	0.00846 0.00199	
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	0.00846 0.00199	
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	0.00846 0.00199	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Mar-07-19 14:00	Mar-07-19 14:00	Mar-07-19 14:00	Mar-07-19 14:00	Mar-07-19 14:00	
	<i>Analyzed:</i>	Mar-08-19 01:35	Mar-08-19 01:46	Mar-08-19 02:18	Mar-08-19 10:39	Mar-08-19 10:50	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		112 4.96	200 4.99	568 4.98	1330 4.98	283 5.00	
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-07-19 17:00	Mar-07-19 17:00	Mar-07-19 17:00	Mar-07-19 17:00	Mar-07-19 17:00	
	<i>Analyzed:</i>	Mar-08-19 06:44	Mar-07-19 22:54	Mar-07-19 23:14	Mar-07-19 23:34	Mar-07-19 23:53	
	<i>Units/RL:</i>	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	<14.9 14.9	<15.0 15.0	20.5 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	316 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	337 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW01**
Lab Sample Id: 616897-001

Matrix: Soil
Date Collected: 03.06.19 11.50

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	112	4.96	mg/kg	03.08.19 01.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.08.19 06.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.08.19 06.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 06.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.08.19 06.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	03.08.19 06.44	
o-Terphenyl	84-15-1	96	%	70-135	03.08.19 06.44	



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW01**
Lab Sample Id: 616897-001

Matrix: Soil
Date Collected: 03.06.19 11.50

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Date Prep: 03.07.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.08.19 02.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.08.19 02.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	03.08.19 02.33		
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.08.19 02.33		



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW02**
Lab Sample Id: 616897-002

Matrix: Soil
Date Collected: 03.06.19 11.00

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	200	4.99	mg/kg	03.08.19 01.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.19 22.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.07.19 22.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.07.19 22.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.07.19 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.07.19 22.54	
o-Terphenyl	84-15-1	97	%	70-135	03.07.19 22.54	



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW02**
Lab Sample Id: 616897-002

Matrix: Soil
Date Collected: 03.06.19 11.00

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 03.07.19 12.00

Basis: Wet Weight

Seq Number: 3081570

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.08.19 02.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.08.19 02.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.08.19 02.52		
4-Bromofluorobenzene	460-00-4	111	%	70-130	03.08.19 02.52		



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW03**
Lab Sample Id: 616897-003

Matrix: Soil
Date Collected: 03.06.19 11.10

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	568	4.98	mg/kg	03.08.19 02.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.07.19 23.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	03.07.19 23.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.07.19 23.14	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	03.07.19 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.07.19 23.14	
o-Terphenyl	84-15-1	99	%	70-135	03.07.19 23.14	



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW03**
Lab Sample Id: 616897-003

Matrix: Soil
Date Collected: 03.06.19 11.10

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Date Prep: 03.07.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.08.19 03.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.08.19 03.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	03.08.19 03.11		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.08.19 03.11		



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW04**
Lab Sample Id: 616897-004

Matrix: Soil
Date Collected: 03.06.19 11.30

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1330	4.98	mg/kg	03.08.19 10.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.07.19 23.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	03.07.19 23.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.07.19 23.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	03.07.19 23.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.07.19 23.34	
o-Terphenyl	84-15-1	100	%	70-135	03.07.19 23.34	



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW04**
Lab Sample Id: 616897-004

Matrix: Soil
Date Collected: 03.06.19 11.30

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Date Prep: 03.07.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.08.19 03.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.08.19 03.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	03.08.19 03.30		
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.08.19 03.30		



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW05**
Lab Sample Id: 616897-005

Matrix: Soil
Date Collected: 03.06.19 11.30

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	283	5.00	mg/kg	03.08.19 10.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	20.5	15.0	mg/kg	03.07.19 23.53		1
Diesel Range Organics (DRO)	C10C28DRO	316	15.0	mg/kg	03.07.19 23.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.07.19 23.53	U	1
Total TPH	PHC635	337	15.0	mg/kg	03.07.19 23.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.07.19 23.53	
o-Terphenyl	84-15-1	95	%	70-135	03.07.19 23.53	



Certificate of Analytical Results 616897



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW05**
Lab Sample Id: 616897-005

Matrix: Soil
Date Collected: 03.06.19 11.30

Date Received: 03.07.19 11.36
Sample Depth: 1 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Date Prep: 03.07.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.08.19 03.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.08.19 03.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.08.19 03.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.08.19 03.49	U	1
o-Xylene	95-47-6	0.00846	0.00199	mg/kg	03.08.19 03.49		1
Total Xylenes	1330-20-7	0.00846	0.00199	mg/kg	03.08.19 03.49		1
Total BTEX		0.00846	0.00199	mg/kg	03.08.19 03.49		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	03.08.19 03.49		
4-Bromofluorobenzene	460-00-4	108	%	70-130	03.08.19 03.49		

- 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 616897

LT Environmental, Inc.

JRU 10

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

MB Sample Id: 7673144-1-BLK

Matrix: Solid

LCS Sample Id: 7673144-1-BKS

Prep Method: E300P

Date Prep: 03.07.19

LCSD Sample Id: 7673144-1-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	267	107	266	106	90-110	0	20	mg/kg	03.07.19 22:55	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

Parent Sample Id: 616897-002

Matrix: Soil

MS Sample Id: 616897-002 S

Prep Method: E300P

Date Prep: 03.07.19

MSD Sample Id: 616897-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	250	454	102	456	102	90-110	0	20	mg/kg	03.08.19 01:56	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

Parent Sample Id: 616899-002

Matrix: Soil

MS Sample Id: 616899-002 S

Prep Method: E300P

Date Prep: 03.07.19

MSD Sample Id: 616899-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.54	250	286	114	264	105	90-110	8	20	mg/kg	03.07.19 23:27	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081581

MB Sample Id: 7673224-1-BLK

Matrix: Solid

LCS Sample Id: 7673224-1-BKS

Prep Method: TX1005P

Date Prep: 03.07.19

LCSD Sample Id: 7673224-1-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	978	98	967	97	70-135	1	20	mg/kg	03.07.19 21:15	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	970	97	70-135	3	20	mg/kg	03.07.19 21:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		125		70-135	%	03.07.19 21:15
o-Terphenyl	94		118		120		70-135	%	03.07.19 21:15

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 616897

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081581

Parent Sample Id: 616897-001

Matrix: Soil

MS Sample Id: 616897-001 S

Prep Method: TX1005P

Date Prep: 03.07.19

MSD Sample Id: 616897-001 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)	<7.99	999	941	94	944	95	70-135	0	20	mg/kg	03.07.19 22:15	
Diesel Range Organics (DRO)	9.72	999	956	95	949	94	70-135	1	20	mg/kg	03.07.19 22:15	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	03.07.19 22:15
o-Terphenyl	112		110		70-135	%	03.07.19 22:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3081570

MB Sample Id: 7673226-1-BLK

Matrix: Solid

LCS Sample Id: 7673226-1-BKS

Prep Method: SW5030B

Date Prep: 03.07.19

LCSD Sample Id: 7673226-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0907	90	0.0932	93	70-130	3	35	mg/kg	03.08.19 00:41	
Toluene	<0.000458	0.101	0.0817	81	0.0847	85	70-130	4	35	mg/kg	03.08.19 00:41	
Ethylbenzene	<0.000568	0.101	0.0795	79	0.0828	83	70-130	4	35	mg/kg	03.08.19 00:41	
m,p-Xylenes	<0.00102	0.201	0.161	80	0.167	84	70-130	4	35	mg/kg	03.08.19 00:41	
o-Xylene	<0.000346	0.101	0.0800	79	0.0834	83	70-130	4	35	mg/kg	03.08.19 00:41	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		105		70-130	%	03.08.19 00:41
4-Bromofluorobenzene	100		96		98		70-130	%	03.08.19 00:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3081570

Parent Sample Id: 616897-001

Matrix: Soil

MS Sample Id: 616897-001 S

Prep Method: SW5030B

Date Prep: 03.07.19

MSD Sample Id: 616897-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0984	99	0.0991	99	70-130	1	35	mg/kg	03.08.19 01:19	
Toluene	<0.00199	0.0994	0.0869	87	0.0884	89	70-130	2	35	mg/kg	03.08.19 01:19	
Ethylbenzene	<0.000561	0.0994	0.0817	82	0.0835	84	70-130	2	35	mg/kg	03.08.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.164	82	0.168	84	70-130	2	35	mg/kg	03.08.19 01:19	
o-Xylene	<0.000342	0.0994	0.0811	82	0.0833	83	70-130	3	35	mg/kg	03.08.19 01:19	

Surrogate

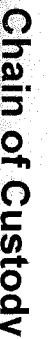
	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.08.19 01:19
4-Bromofluorobenzene	100		101		70-130	%	03.08.19 01:19

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

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

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



Work Order No: 210097

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) 565-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 575-382-7550

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental, Inc., Permian office	Company Name:	ATO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	kyler@ltenv.com / Abaker@ltenv.com

Work Order Comments Program: UST/PST ☐ RP ☐ Rowfields ☐ C ☐ Deepfund State of Project: Reporting: Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	SRU10	Turn Around	
Project Number:		Routine	☐
P.O. Number:	2RP3179	Rush:	3/8/19
Sampler's Name:	Garrett Green	Due Date:	3/8/19

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	0.5/0.2				Thermometer:	AB	
Received Intact:	Yes	No					
Cooler Custody Seals:	Yes	No	N/A		Correction Factor:	-0.1	
Sample Custody Seals:	Yes	No	N/A		Total Containers:		

ANALYSIS REQUEST								Work Order Notes
Number of Containers EPA 8015) EPA 8021) (EPA 300.0)								TAT starts the day received by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (E)	BTEX (E)	Chloride
SW01	S	3/6/19	1150	1'-4'	1	X	X	X
SW02	S	3/6/19	1100	1'-4'	1	X	X	X
SW03	S	3/6/19	1110	1'-4'	1	X	X	X
SW04	S	3/6/19	1130	1'-4'	1	X	X	X
SW05	S	3/6/19	1130	1'-4'	1	X	X	X

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$6 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 <i>Sally Jones</i>	<i>John Doe</i>	3/6/18 14:00	2 <i>[Signature]</i>	<i>[Signature]</i>	3/7/18
3			4		1/3/4
5			6		

ORIGIN ID:CAOA (575) 887-6245
XENCO
PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

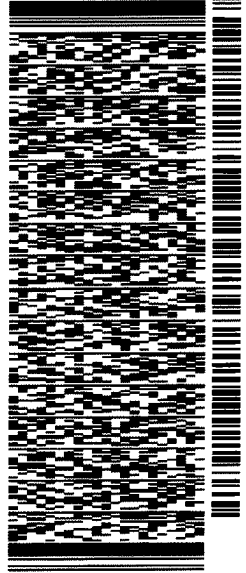
SHIP DATE: 08MAR19
ACTWGT: 37.00 LB
CAD: 101813706NET4100
DIMS: 22x14x17 IN
BILL RECIPIENT

TO HOLD FOR XENCO

FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S

MIDLAND TX 79711
(800) 794-1296 REF:

PO: DEPT:



J191010010701ur

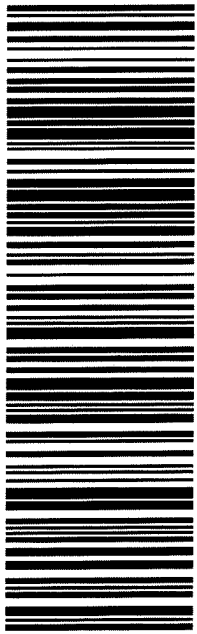
THU - 07 MAR HOLD

STANDARD OVERNIGHT

TRK# 7746 3882 5912
0201

41 MAFA

HLD
MAFA
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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 03/07/2019 11:36:00 AM

Work Order #: 616897

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)?	.2
#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?	Yes
#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

Brianna Teel

Date: 03/07/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 03/07/2019

Analytical Report 616898

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 10

08-MAR-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



08-MAR-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **616898**

JRU 10

Project Address: Delaware Basin

Adrian Baker:

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) 616898. 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. 616898 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

Project Assistant

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

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Sample Cross Reference 616898



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	03-05-19 14:30	20 ft	616898-001
PH02	S	03-05-19 15:40	20 ft	616898-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID:
Work Order Number(s): 616898

Report Date: 08-MAR-19
Date Received: 03/07/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081570 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 616898-002,616898-001.

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



Certificate of Analysis Summary 616898

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id:

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Thu Mar-07-19 11:39 am

Report Date: 08-MAR-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	616898-001	616898-002				
	Field Id:	PH01	PH02				
	Depth:	20- ft	20- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Mar-05-19 14:30	Mar-05-19 15:40				
BTEX by EPA 8021B	Extracted:	Mar-07-19 12:00	Mar-07-19 12:00				
	Analyzed:	Mar-08-19 05:05	Mar-08-19 10:24				
	Units/RL:	mg/kg RL	mg/kg RL				
		0.0546 0.0202	0.566 0.200				
Benzene							
Toluene		1.25 0.0202	10.4 0.200				
Ethylbenzene		0.117 0.0202	8.46 0.200				
m,p-Xylenes		3.88 0.0403	62.4 0.399				
o-Xylene		2.16 0.0202	8.08 0.200				
Total Xylenes		6.04 0.0202	70.5 0.200				
Total BTEX		7.46 0.0202	89.9 0.200				
Inorganic Anions by EPA 300	Extracted:	Mar-07-19 14:00	Mar-07-19 14:00				
	Analyzed:	Mar-08-19 11:22	Mar-08-19 11:33				
	Units/RL:	mg/kg RL	mg/kg RL				
		1470 24.9	749 5.00				
Chloride							
TPH by SW8015 Mod	Extracted:	Mar-07-19 17:00	Mar-07-19 17:00				
	Analyzed:	Mar-08-19 00:13	Mar-08-19 00:33				
	Units/RL:	mg/kg RL	mg/kg RL				
		818 15.0	1940 15.0				
Gasoline Range Hydrocarbons (GRO)							
Diesel Range Organics (DRO)		1070 15.0	1360 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		1890 15.0	3300 15.0				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 616898



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **PH01**
Lab Sample Id: 616898-001

Matrix: Soil
Date Collected: 03.05.19 14.30

Date Received: 03.07.19 11.39
Sample Depth: 20 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1470	24.9	mg/kg	03.08.19 11.22		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	818	15.0	mg/kg	03.08.19 00.13		1
Diesel Range Organics (DRO)	C10C28DRO	1070	15.0	mg/kg	03.08.19 00.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 00.13	U	1
Total TPH	PHC635	1890	15.0	mg/kg	03.08.19 00.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.08.19 00.13	
o-Terphenyl	84-15-1	101	%	70-135	03.08.19 00.13	



Certificate of Analytical Results 616898



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **PH01**
Lab Sample Id: 616898-001

Matrix: Soil
Date Collected: 03.05.19 14.30

Date Received: 03.07.19 11.39
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Prep Method: SW5030B

% Moisture:

Date Prep: 03.07.19 12.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0546	0.0202	mg/kg	03.08.19 05.05		10
Toluene	108-88-3	1.25	0.0202	mg/kg	03.08.19 05.05		10
Ethylbenzene	100-41-4	0.117	0.0202	mg/kg	03.08.19 05.05		10
m,p-Xylenes	179601-23-1	3.88	0.0403	mg/kg	03.08.19 05.05		10
o-Xylene	95-47-6	2.16	0.0202	mg/kg	03.08.19 05.05		10
Total Xylenes	1330-20-7	6.04	0.0202	mg/kg	03.08.19 05.05		10
Total BTEX		7.46	0.0202	mg/kg	03.08.19 05.05		10
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	121	%	70-130	03.08.19 05.05		
4-Bromofluorobenzene	460-00-4	251	%	70-130	03.08.19 05.05	**	



Certificate of Analytical Results 616898



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **PH02**
Lab Sample Id: 616898-002

Matrix: Soil
Date Collected: 03.05.19 15.40

Date Received: 03.07.19 11.39
Sample Depth: 20 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3081522

Date Prep: 03.07.19 14.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	749	5.00	mg/kg	03.08.19 11.33		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081581

Date Prep: 03.07.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1940	15.0	mg/kg	03.08.19 00.33		1
Diesel Range Organics (DRO)	C10C28DRO	1360	15.0	mg/kg	03.08.19 00.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	03.08.19 00.33	U	1
Total TPH	PHC635	3300	15.0	mg/kg	03.08.19 00.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	03.08.19 00.33	
o-Terphenyl	84-15-1	99	%	70-135	03.08.19 00.33	



Certificate of Analytical Results 616898



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **PH02**
Lab Sample Id: 616898-002

Matrix: Soil
Date Collected: 03.05.19 15.40

Date Received: 03.07.19 11.39
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3081570

Date Prep: 03.07.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.566	0.200	mg/kg	03.08.19 10.24		100
Toluene	108-88-3	10.4	0.200	mg/kg	03.08.19 10.24		100
Ethylbenzene	100-41-4	8.46	0.200	mg/kg	03.08.19 10.24		100
m,p-Xylenes	179601-23-1	62.4	0.399	mg/kg	03.08.19 10.24		100
o-Xylene	95-47-6	8.08	0.200	mg/kg	03.08.19 10.24		100
Total Xylenes	1330-20-7	70.5	0.200	mg/kg	03.08.19 10.24		100
Total BTEX		89.9	0.200	mg/kg	03.08.19 10.24		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	147	%	70-130	03.08.19 10.24	**	
1,4-Difluorobenzene	540-36-3	110	%	70-130	03.08.19 10.24		

- 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 616898

LT Environmental, Inc.

JRU 10

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

MB Sample Id: 7673144-1-BLK

Matrix: Solid

LCS Sample Id: 7673144-1-BKS

Prep Method: E300P

Date Prep: 03.07.19

LCSD Sample Id: 7673144-1-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	267	107	266	106	90-110	0	20	mg/kg	03.07.19 22:55	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

Parent Sample Id: 616897-002

Matrix: Soil

MS Sample Id: 616897-002 S

Prep Method: E300P

Date Prep: 03.07.19

MSD Sample Id: 616897-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	200	250	454	102	456	102	90-110	0	20	mg/kg	03.08.19 01:56	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3081522

Parent Sample Id: 616899-002

Matrix: Soil

MS Sample Id: 616899-002 S

Prep Method: E300P

Date Prep: 03.07.19

MSD Sample Id: 616899-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.54	250	286	114	264	105	90-110	8	20	mg/kg	03.07.19 23:27	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081581

MB Sample Id: 7673224-1-BLK

Matrix: Solid

LCS Sample Id: 7673224-1-BKS

Prep Method: TX1005P

Date Prep: 03.07.19

LCSD Sample Id: 7673224-1-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	978	98	967	97	70-135	1	20	mg/kg	03.07.19 21:15	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	970	97	70-135	3	20	mg/kg	03.07.19 21:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		126		125		70-135	%	03.07.19 21:15
o-Terphenyl	94		118		120		70-135	%	03.07.19 21:15

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 616898

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081581

Parent Sample Id: 616897-001

Matrix: Soil

MS Sample Id: 616897-001 S

Prep Method: TX1005P

Date Prep: 03.07.19

MSD Sample Id: 616897-001 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)	<7.99	999	941	94	944	95	70-135	0	20	mg/kg	03.07.19 22:15	
Diesel Range Organics (DRO)	9.72	999	956	95	949	94	70-135	1	20	mg/kg	03.07.19 22:15	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		120		70-135	%	03.07.19 22:15
o-Terphenyl	112		110		70-135	%	03.07.19 22:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3081570

MB Sample Id: 7673226-1-BLK

Matrix: Solid

LCS Sample Id: 7673226-1-BKS

Prep Method: SW5030B

Date Prep: 03.07.19

LCSD Sample Id: 7673226-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0907	90	0.0932	93	70-130	3	35	mg/kg	03.08.19 00:41	
Toluene	<0.000458	0.101	0.0817	81	0.0847	85	70-130	4	35	mg/kg	03.08.19 00:41	
Ethylbenzene	<0.000568	0.101	0.0795	79	0.0828	83	70-130	4	35	mg/kg	03.08.19 00:41	
m,p-Xylenes	<0.00102	0.201	0.161	80	0.167	84	70-130	4	35	mg/kg	03.08.19 00:41	
o-Xylene	<0.000346	0.101	0.0800	79	0.0834	83	70-130	4	35	mg/kg	03.08.19 00:41	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		105		105		70-130	%	03.08.19 00:41
4-Bromofluorobenzene	100		96		98		70-130	%	03.08.19 00:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3081570

Parent Sample Id: 616897-001

Matrix: Soil

MS Sample Id: 616897-001 S

Prep Method: SW5030B

Date Prep: 03.07.19

MSD Sample Id: 616897-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.0984	99	0.0991	99	70-130	1	35	mg/kg	03.08.19 01:19	
Toluene	<0.00199	0.0994	0.0869	87	0.0884	89	70-130	2	35	mg/kg	03.08.19 01:19	
Ethylbenzene	<0.000561	0.0994	0.0817	82	0.0835	84	70-130	2	35	mg/kg	03.08.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.164	82	0.168	84	70-130	2	35	mg/kg	03.08.19 01:19	
o-Xylene	<0.000342	0.0994	0.0811	82	0.0833	83	70-130	3	35	mg/kg	03.08.19 01:19	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.08.19 01:19
4-Bromofluorobenzene	100		101		70-130	%	03.08.19 01:19

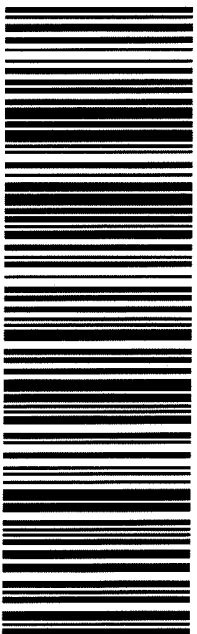
MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

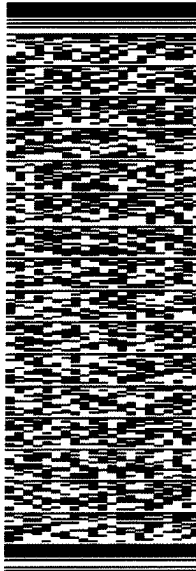
$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 $\text{Log Diff.} = \text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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

ORIGIN ID:CAOA (575) 887-6245 XENCO PAC N MAIL 910 W PIERCE ST CARLSBAD NM 88220 UNITED STATES US		SHIP DATE: 06MAR19 ACTWTG: 37.00 LB CAD: 101813706INET4100 DIMS: 22x14x17 IN BILL RECIPIENT
TO HOLD FOR XENCO FEDEX EXPRESS SHIP CENTER FEDEX SHIP CENTER 3600 COUNTY RD 1276 S MIDLAND TX 79711 (806) 794-1296 NV REF PO DEPT		

TRK# 7746 3882 5912 0201 THU - 07 MAR HOLD STANDARD OVERNIGHT HLD MAFA TX-US LBB	

565J1/46D3/23AD

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 03/07/2019 11:39:39 AM

Work Order #: 616898

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)?	.2
#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

Brianna Teel

Date: 03/07/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 03/07/2019

Analytical Report 617315

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU-10

25-MAR-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



25-MAR-19

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

Reference: XENCO Report No(s): **617315**
JRU-10
Project Address: ---

Adrian Baker:

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) 617315. 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. 617315 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
Project Assistant

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

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



Sample Cross Reference 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	03-05-19 12:45	6 ft	617315-001
PH01A	S	03-07-19 10:40	25 ft	617315-002
PH02	S	03-07-19 12:05	20 ft	617315-003
PH02A	S	03-08-19 15:00	42 ft	617315-004



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU-10*

Project ID: ---
Work Order Number(s): 617315

Report Date: 25-MAR-19
Date Received: 03/12/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081985 TPH by SW8015 Mod

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

Samples affected are: 617315-004,617315-003.

Batch: LBA-3082547 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 617315-002.

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

Batch: LBA-3082772 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 617315-004.

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



Certificate of Analysis Summary 617315

LT Environmental, Inc., Arvada, CO

Project Name: JRU-10



Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 25-MAR-19
Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	617315-001	617315-002	617315-003	617315-004		
	<i>Field Id:</i>	PH01	PH01A	PH02	PH02A		
	<i>Depth:</i>	6- ft	25- ft	20- ft	42- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Mar-05-19 12:45	Mar-07-19 10:40	Mar-07-19 12:05	Mar-08-19 15:00		
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-18-19 16:00	Mar-18-19 16:00	Mar-18-19 16:00	Mar-20-19 13:30		
	<i>Analyzed:</i>	Mar-19-19 18:06	Mar-19-19 15:15	Mar-19-19 17:28	Mar-21-19 00:01		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.502 0.502	<0.00200 0.00200	<0.200 0.200	<0.402 0.402		
Toluene		4.34 0.502	<0.00200 0.00200	9.81 0.200	4.19 0.402		
Ethylbenzene		5.28 0.502	<0.00200 0.00200	11.8 0.200	12.2 0.402		
m,p-Xylenes		78.5 1.00	<0.00400 0.00400	66.8 0.401	60.9 0.803		
o-Xylene		0.766 0.502	<0.00200 0.00200	17.7 0.200	15.0 0.402		
Total Xylenes		79.3 0.502	<0.00200 0.00200	84.5 0.200	75.9 0.402		
Total BTEX		88.9 0.502	<0.00200 0.00200	106 0.200	92.3 0.402		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Mar-13-19 08:30	Mar-13-19 08:30	Mar-13-19 08:30	Mar-13-19 08:30		
	<i>Analyzed:</i>	Mar-13-19 17:28	Mar-13-19 17:34	Mar-13-19 17:41	Mar-13-19 17:47		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		908 4.98	264 4.98	241 4.98	474 4.98		
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-12-19 14:00	Mar-12-19 14:00	Mar-12-19 14:00	Mar-12-19 14:00		
	<i>Analyzed:</i>	Mar-13-19 01:32	Mar-13-19 02:33	Mar-13-19 02:53	Mar-13-19 03:13		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		3110 15.0	<14.9 14.9	4140 14.9	3400 15.0		
Diesel Range Organics (DRO)		2090 15.0	35.0 14.9	3180 14.9	2720 15.0		
Motor Oil Range Hydrocarbons (MRO)		17.9 15.0	<14.9 14.9	21.7 14.9	18.1 15.0		
Total TPH		5220 15.0	35.0 14.9	7340 14.9	6140 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH01**
Lab Sample Id: 617315-001

Matrix: Soil
Date Collected: 03.05.19 12.45

Date Received: 03.12.19 12.05
Sample Depth: 6 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3082023

Date Prep: 03.13.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	908	4.98	mg/kg	03.13.19 17.28		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081985

Date Prep: 03.12.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3110	15.0	mg/kg	03.13.19 01.32		1
Diesel Range Organics (DRO)	C10C28DRO	2090	15.0	mg/kg	03.13.19 01.32		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	17.9	15.0	mg/kg	03.13.19 01.32		1
Total TPH	PHC635	5220	15.0	mg/kg	03.13.19 01.32		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	03.13.19 01.32	
o-Terphenyl	84-15-1	104	%	70-135	03.13.19 01.32	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH01**
Lab Sample Id: 617315-001

Matrix: Soil
Date Collected: 03.05.19 12.45

Date Received: 03.12.19 12.05
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3082547

Date Prep: 03.18.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.502	0.502	mg/kg	03.19.19 18.06	U	250
Toluene	108-88-3	4.34	0.502	mg/kg	03.19.19 18.06		250
Ethylbenzene	100-41-4	5.28	0.502	mg/kg	03.19.19 18.06		250
m,p-Xylenes	179601-23-1	78.5	1.00	mg/kg	03.19.19 18.06		250
o-Xylene	95-47-6	0.766	0.502	mg/kg	03.19.19 18.06		250
Total Xylenes	1330-20-7	79.3	0.502	mg/kg	03.19.19 18.06		250
Total BTEX		88.9	0.502	mg/kg	03.19.19 18.06		250
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.19.19 18.06		
4-Bromofluorobenzene	460-00-4	135	%	70-130	03.19.19 18.06	**	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH01A**
Lab Sample Id: 617315-002

Matrix: Soil
Date Collected: 03.07.19 10.40

Date Received: 03.12.19 12.05
Sample Depth: 25 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3082023

Date Prep: 03.13.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	264	4.98	mg/kg	03.13.19 17.34		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081985

Date Prep: 03.12.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.13.19 02.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	35.0	14.9	mg/kg	03.13.19 02.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	03.13.19 02.33	U	1
Total TPH	PHC635	35.0	14.9	mg/kg	03.13.19 02.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.13.19 02.33	
o-Terphenyl	84-15-1	94	%	70-135	03.13.19 02.33	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH01A**
Lab Sample Id: 617315-002

Matrix: Soil
Date Collected: 03.07.19 10.40

Date Received: 03.12.19 12.05
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3082547

Date Prep: 03.18.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.19.19 15.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.19.19 15.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.19.19 15.15		
4-Bromofluorobenzene	460-00-4	134	%	70-130	03.19.19 15.15	**	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH02** Matrix: Soil Date Received: 03.12.19 12.05
Lab Sample Id: 617315-003 Date Collected: 03.07.19 12.05 Sample Depth: 20 ft
Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 03.13.19 08.30 Basis: Wet Weight
Seq Number: 3082023

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	241	4.98	mg/kg	03.13.19 17.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
Tech: ARM % Moisture:
Analyst: ARM Date Prep: 03.12.19 14.00 Basis: Wet Weight
Seq Number: 3081985

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	4140	14.9	mg/kg	03.13.19 02.53		1
Diesel Range Organics (DRO)	C10C28DRO	3180	14.9	mg/kg	03.13.19 02.53		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	21.7	14.9	mg/kg	03.13.19 02.53		1
Total TPH	PHC635	7340	14.9	mg/kg	03.13.19 02.53		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	158	%	70-135	03.13.19 02.53	**
o-Terphenyl	84-15-1	107	%	70-135	03.13.19 02.53	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH02**
Lab Sample Id: 617315-003

Matrix: Soil
Date Collected: 03.07.19 12.05

Date Received: 03.12.19 12.05
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3082547

Date Prep: 03.18.19 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.200	0.200	mg/kg	03.19.19 17.28	U	100
Toluene	108-88-3	9.81	0.200	mg/kg	03.19.19 17.28		100
Ethylbenzene	100-41-4	11.8	0.200	mg/kg	03.19.19 17.28		100
m,p-Xylenes	179601-23-1	66.8	0.401	mg/kg	03.19.19 17.28		100
o-Xylene	95-47-6	17.7	0.200	mg/kg	03.19.19 17.28		100
Total Xylenes	1330-20-7	84.5	0.200	mg/kg	03.19.19 17.28		100
Total BTEX		106	0.200	mg/kg	03.19.19 17.28		100
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	260	%	70-130	03.19.19 17.28	**	
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.19.19 17.28		



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH02A**
Lab Sample Id: 617315-004

Matrix: Soil
Date Collected: 03.08.19 15.00

Date Received: 03.12.19 12.05
Sample Depth: 42 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3082023

Date Prep: 03.13.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	474	4.98	mg/kg	03.13.19 17.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3081985

Date Prep: 03.12.19 14.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	3400	15.0	mg/kg	03.13.19 03.13		1
Diesel Range Organics (DRO)	C10C28DRO	2720	15.0	mg/kg	03.13.19 03.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	18.1	15.0	mg/kg	03.13.19 03.13		1
Total TPH	PHC635	6140	15.0	mg/kg	03.13.19 03.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	223	%	70-135	03.13.19 03.13	**
o-Terphenyl	84-15-1	105	%	70-135	03.13.19 03.13	



Certificate of Analytical Results 617315



LT Environmental, Inc., Arvada, CO

JRU-10

Sample Id: **PH02A**
Lab Sample Id: 617315-004

Matrix: Soil
Date Collected: 03.08.19 15.00

Date Received: 03.12.19 12.05
Sample Depth: 42 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3082772

Date Prep: 03.20.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.402	0.402	mg/kg	03.21.19 00.01	U	200
Toluene	108-88-3	4.19	0.402	mg/kg	03.21.19 00.01		200
Ethylbenzene	100-41-4	12.2	0.402	mg/kg	03.21.19 00.01		200
m,p-Xylenes	179601-23-1	60.9	0.803	mg/kg	03.21.19 00.01		200
o-Xylene	95-47-6	15.0	0.402	mg/kg	03.21.19 00.01		200
Total Xylenes	1330-20-7	75.9	0.402	mg/kg	03.21.19 00.01		200
Total BTEX		92.3	0.402	mg/kg	03.21.19 00.01		200
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	161	%	70-130	03.21.19 00.01	**	
1,4-Difluorobenzene	540-36-3	105	%	70-130	03.21.19 00.01		

- 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 617315

LT Environmental, Inc.

JRU-10

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3082023

MB Sample Id: 7673457-1-BLK

Matrix: Solid

LCS Sample Id: 7673457-1-BKS

Prep Method: E300P

Date Prep: 03.13.19

LCSD Sample Id: 7673457-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.10	250	270	108	257	103	90-110	5	20	mg/kg	03.13.19 14:57	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3082023

Parent Sample Id: 617103-014

Matrix: Soil

MS Sample Id: 617103-014 S

Prep Method: E300P

Date Prep: 03.13.19

MSD Sample Id: 617103-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.33	252	272	106	271	106	90-110	0	20	mg/kg	03.13.19 16:48	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3082023

Parent Sample Id: 617402-001

Matrix: Soil

MS Sample Id: 617402-001 S

Prep Method: E300P

Date Prep: 03.13.19

MSD Sample Id: 617402-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	16.0	250	274	103	281	106	90-110	3	20	mg/kg	03.13.19 15:17	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081985

MB Sample Id: 7673483-1-BLK

Matrix: Solid

LCS Sample Id: 7673483-1-BKS

Prep Method: TX1005P

Date Prep: 03.12.19

LCSD Sample Id: 7673483-1-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	1080	108	1020	102	70-135	6	20	mg/kg	03.12.19 21:12	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1040	104	70-135	5	20	mg/kg	03.12.19 21:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		123		119		70-135	%	03.12.19 21:12
o-Terphenyl	105		111		106		70-135	%	03.12.19 21:12

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 617315

LT Environmental, Inc.

JRU-10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3081985

Parent Sample Id: 617310-001

Matrix: Soil

MS Sample Id: 617310-001 S

Prep Method: TX1005P

Date Prep: 03.12.19

MSD Sample Id: 617310-001 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)	<7.99	999	1040	104	1030	103	70-135	1	20	mg/kg	03.12.19 22:12	
Diesel Range Organics (DRO)	<8.12	999	1070	107	1070	107	70-135	0	20	mg/kg	03.12.19 22:12	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		124		70-135	%	03.12.19 22:12
o-Terphenyl	100		95		70-135	%	03.12.19 22:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3082547

MB Sample Id: 7673824-1-BLK

Matrix: Solid

LCS Sample Id: 7673824-1-BKS

Prep Method: SW5030B

Date Prep: 03.18.19

LCSD Sample Id: 7673824-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.107	107	0.103	104	70-130	4	35	mg/kg	03.19.19 06:12	
Toluene	<0.000457	0.100	0.113	113	0.110	111	70-130	3	35	mg/kg	03.19.19 06:12	
Ethylbenzene	<0.000567	0.100	0.104	104	0.101	102	70-130	3	35	mg/kg	03.19.19 06:12	
m,p-Xylenes	<0.00102	0.201	0.200	100	0.194	97	70-130	3	35	mg/kg	03.19.19 06:12	
o-Xylene	<0.000346	0.100	0.102	102	0.100	101	70-130	2	35	mg/kg	03.19.19 06:12	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		100		102		70-130	%	03.19.19 06:12
4-Bromofluorobenzene	108		104		106		70-130	%	03.19.19 06:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3082772

MB Sample Id: 7673968-1-BLK

Matrix: Solid

LCS Sample Id: 7673968-1-BKS

Prep Method: SW5030B

Date Prep: 03.20.19

LCSD Sample Id: 7673968-1-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	0.113	113	0.117	117	70-130	3	35	mg/kg	03.20.19 14:50	
Toluene	<0.00200	0.100	0.114	114	0.118	118	70-130	3	35	mg/kg	03.20.19 14:50	
Ethylbenzene	<0.000565	0.100	0.101	101	0.103	103	70-130	2	35	mg/kg	03.20.19 14:50	
m,p-Xylenes	<0.00101	0.200	0.198	99	0.203	101	70-130	2	35	mg/kg	03.20.19 14:50	
o-Xylene	<0.00200	0.100	0.0992	99	0.102	102	70-130	3	35	mg/kg	03.20.19 14:50	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	117		108		109		70-130	%	03.20.19 14:50
4-Bromofluorobenzene	114		105		108		70-130	%	03.20.19 14:50

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

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

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 617315

LT Environmental, Inc.

JRU-10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3082547

Parent Sample Id: 617912-001

Matrix: Soil

MS Sample Id: 617912-001 S

Prep Method: SW5030B

Date Prep: 03.18.19

MSD Sample Id: 617912-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0641	64	0.0686	68	70-130	7	35	mg/kg	03.19.19 06:50	X
Toluene	<0.000454	0.0996	0.0751	75	0.0785	78	70-130	4	35	mg/kg	03.19.19 06:50	
Ethylbenzene	<0.000563	0.0996	0.0920	92	0.0942	93	70-130	2	35	mg/kg	03.19.19 06:50	
m,p-Xylenes	<0.00101	0.199	0.179	90	0.182	90	70-130	2	35	mg/kg	03.19.19 06:50	
o-Xylene	<0.000343	0.0996	0.0886	89	0.0898	89	70-130	1	35	mg/kg	03.19.19 06:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		102		70-130	%	03.19.19 06:50
4-Bromofluorobenzene	110		111		70-130	%	03.19.19 06:50

Analytical Method: BTEX by EPA 8021B

Seq Number: 3082772

Parent Sample Id: 618088-010

Matrix: Soil

MS Sample Id: 618088-010 S

Prep Method: SW5030B

Date Prep: 03.20.19

MSD Sample Id: 618088-010 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	0.0994	0.104	105	0.107	107	70-130	3	35	mg/kg	03.20.19 15:32	
Toluene	0.000601	0.0994	0.107	107	0.109	108	70-130	2	35	mg/kg	03.20.19 15:32	
Ethylbenzene	<0.000561	0.0994	0.0960	97	0.0944	94	70-130	2	35	mg/kg	03.20.19 15:32	
m,p-Xylenes	<0.00101	0.199	0.189	95	0.186	93	70-130	2	35	mg/kg	03.20.19 15:32	
o-Xylene	0.000391	0.0994	0.0955	96	0.0931	93	70-130	3	35	mg/kg	03.20.19 15:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		110		70-130	%	03.20.19 15:32
4-Bromofluorobenzene	113		111		70-130	%	03.20.19 15:32

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

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

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

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

Chain of Custody

Work Order No.:

101731

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littel
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:	

Work Order Comments	
Program: UST/PST	☐ RP ☐ Brownfields ☐ C ☐ I ☐ Pertund ☐
State of Project:	
Reporting Level II	☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

[illegible]

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Robert Miller</i>	<i>[Signature]</i>	03/08/19 @ 1:41	<i>[Signature]</i>	<i>[Signature]</i>	3/13/19
2 <i>[Signature]</i>	<i>[Signature]</i>		<i>[Signature]</i>	<i>[Signature]</i>	1:05
3					
4					
5					
6					

ORIGIN ID:CAOA (5/5) 887-6245
XENCO
PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 11 MAR 19
ACTWGT: 38.00 LB
CAD: 101813706NET4100
DIMS: 26x14x15 IN
BILL RECIPIENT

TO HOLD FOR XENCO

FEDEX EXPRESS SHIP CENTER
FEDEX SHIP CENTER
3600 COUNTY RD 1276 S

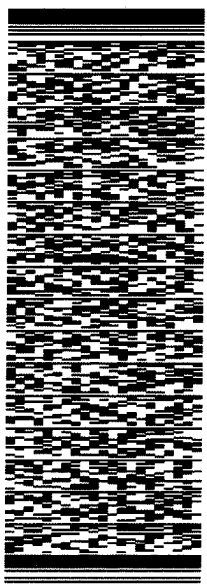
MIDLAND TX 79711

(806) 794-1296

REF:

PO:

DEPT:



565.1146D3/23AD

TRK# 7746 7464 9154
0201

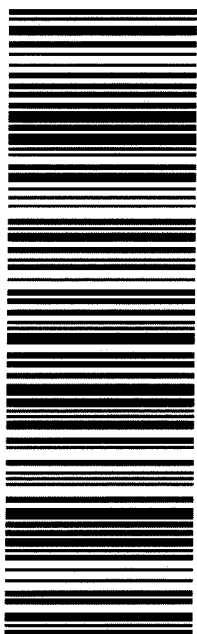
TUE - 12 MAR HOLD

STANDARD OVERNIGHT

HLD

41 MAFA

MAFA
TX-US LBB



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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.

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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 03/12/2019 12:05:00 PM

Work Order #: 617315

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)?	.2
#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

Brianna Teel

Date: 03/12/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 03/12/2019

Analytical Report 620474

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 10 TB

2RP-3179,2RP-3464, 2RP-5243

10-APR-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



10-APR-19

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **620474**

JRU 10 TB

Project Address: Delaware Basin

Adrian Baker:

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) 620474. 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. 620474 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,

Kalei Stout

Midland Laboratory Director

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01F	S	04-03-19 10:10	35 ft	620474-001
BH010	S	04-04-19 11:00	80 ft	620474-002
BH02B	S	04-04-19 14:30	15 ft	620474-003
BH020	S	04-05-19 08:30	80 ft	620474-004
BH03	S	04-05-19 09:00	5 ft	620474-005
BH03A	S	04-05-19 09:10	10 ft	620474-006
BH04D	S	04-05-19 10:15	25 ft	620474-007
BH04I	S	04-05-19 11:45	50 ft	620474-008
BH04C	S	04-05-19 12:45	20 ft	620474-009
BH05E	S	04-05-19 13:00	30 ft	620474-010
BH06	S	04-05-19 13:15	5 ft	620474-011
BH06E	S	04-05-19 13:55	30 ft	620474-012



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10 TB*

Project ID: 2RP-3179, 2RP-3464, 2RP
Work Order Number(s): 620474

Report Date: 10-APR-19
Date Received: 04/09/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3085165 Inorganic Anions by EPA 300

Lab Sample ID 620474-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 620474-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.

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

Batch: LBA-3085184 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 620474-001, 620474-005, 620474-004, 620474-003.



Certificate of Analysis Summary 620474

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10 TB



Project Id: 2RP-3179,2RP-3464, 2RP-5243

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Tue Apr-09-19 12:09 pm

Report Date: 10-APR-19

Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	620474-001	620474-002	620474-003	620474-004	620474-005	620474-006
	<i>Field Id:</i>	BH01F	BH010	BH02B	BH020	BH03	BH03A
	<i>Depth:</i>	35- ft	80- ft	15- ft	80- ft	5- ft	10- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-03-19 10:10	Apr-04-19 11:00	Apr-04-19 14:30	Apr-05-19 08:30	Apr-05-19 09:00	Apr-05-19 09:10
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30
	<i>Analyzed:</i>	Apr-10-19 10:21	Apr-10-19 10:02	Apr-10-19 11:35	Apr-10-19 11:54	Apr-10-19 12:13	Apr-10-19 12:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.499 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Toluene		9.90 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		11.6 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		56.5 0.998	<0.00399 0.00399	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402	<0.00401 0.00401
o-Xylene		15.1 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		71.6 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		93.1 0.499	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Inorganic Anions by EPA 300 SUB: T104704219-19-19	<i>Extracted:</i>	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15
	<i>Analyzed:</i>	Apr-10-19 10:23	Apr-10-19 10:50	Apr-10-19 10:57	Apr-10-19 11:04	Apr-10-19 11:11	Apr-10-19 11:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2090 D 125	<25.0 25.0	69.9 25.0	<25.0 25.0	1000 125	833 250
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00
	<i>Analyzed:</i>	Apr-10-19 05:57	Apr-10-19 00:35	Apr-10-19 01:31	Apr-10-19 01:50	Apr-10-19 02:09	Apr-10-19 02:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		6030 74.7	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		3500 74.7	<15.0 15.0	<15.0 15.0	50.9 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<74.7 74.7	<15.0 15.0	<15.0 15.0	16.8 15.0	<14.9 14.9	<15.0 15.0
Total TPH		9530 74.7	<15.0 15.0	<15.0 15.0	67.7 15.0	<14.9 14.9	<15.0 15.0
Total GRO-DRO		9530 74.7	<15.0 15.0	<15.0 15.0	50.9 15.0	<14.9 14.9	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analysis Summary 620474

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10 TB



Project Id: 2RP-3179,2RP-3464, 2RP-5243

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Tue Apr-09-19 12:09 pm

Report Date: 10-APR-19

Project Manager: Kalei Stout

Analysis Requested	Lab Id:	620474-007	620474-008	620474-009	620474-010	620474-011	620474-012
	Field Id:	BH04D	BH04I	BH04C	BH05E	BH06	BH06E
	Depth:	25- ft	50- ft	20- ft	30- ft	5- ft	30- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Apr-05-19 10:15	Apr-05-19 11:45	Apr-05-19 12:45	Apr-05-19 13:00	Apr-05-19 13:15	Apr-05-19 13:55
BTEX by EPA 8021B	Extracted:	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30	Apr-09-19 13:30
	Analyzed:	Apr-10-19 12:51	Apr-10-19 13:10	Apr-10-19 13:29	Apr-10-19 13:49	Apr-10-19 14:08	Apr-10-19 14:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398	<0.00400 0.00400	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300 SUB: T104704219-19-19	Extracted:	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15	Apr-10-19 09:15
	Analyzed:	Apr-10-19 11:25	Apr-10-19 11:32	Apr-10-19 11:39	Apr-10-19 11:53	Apr-10-19 12:00	Apr-10-19 12:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		90.6 50.0	93.8 25.0	240 25.0	81.2 25.0	385 25.0	101 25.0
TPH by SW8015 Mod	Extracted:	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00	Apr-09-19 17:00
	Analyzed:	Apr-10-19 02:46	Apr-10-19 03:05	Apr-10-19 03:24	Apr-10-19 03:43	Apr-10-19 04:02	Apr-10-19 04:21
	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	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	26.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	26.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	26.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH01F**
Lab Sample Id: 620474-001

Matrix: Soil
Date Collected: 04.03.19 10.10

Date Received: 04.09.19 12.09
Sample Depth: 35 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2090	125	mg/kg	04.10.19 10.30	D	5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	6030	74.7	mg/kg	04.10.19 05.57		5
Diesel Range Organics (DRO)	C10C28DRO	3500	74.7	mg/kg	04.10.19 05.57		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<74.7	74.7	mg/kg	04.10.19 05.57	U	5
Total TPH	PHC635	9530	74.7	mg/kg	04.10.19 05.57		5
Total GRO-DRO	PHC628	9530	74.7	mg/kg	04.10.19 05.57		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	04.10.19 05.57	
o-Terphenyl	84-15-1	103	%	70-135	04.10.19 05.57	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH01F**
Lab Sample Id: 620474-001

Matrix: Soil
Date Collected: 04.03.19 10.10

Date Received: 04.09.19 12.09
Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.499	0.499	mg/kg	04.10.19 10.21	U	250
Toluene	108-88-3	9.90	0.499	mg/kg	04.10.19 10.21		250
Ethylbenzene	100-41-4	11.6	0.499	mg/kg	04.10.19 10.21		250
m,p-Xylenes	179601-23-1	56.5	0.998	mg/kg	04.10.19 10.21		250
o-Xylene	95-47-6	15.1	0.499	mg/kg	04.10.19 10.21		250
Total Xylenes	1330-20-7	71.6	0.499	mg/kg	04.10.19 10.21		250
Total BTEX		93.1	0.499	mg/kg	04.10.19 10.21		250
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.10.19 10.21		
4-Bromofluorobenzene	460-00-4	138	%	70-130	04.10.19 10.21	**	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH010**
Lab Sample Id: 620474-002

Matrix: Soil
Date Collected: 04.04.19 11.00

Date Received: 04.09.19 12.09
Sample Depth: 80 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0	mg/kg	04.10.19 10.50	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 00.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 00.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 00.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 00.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 00.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 00.35	
o-Terphenyl	84-15-1	95	%	70-135	04.10.19 00.35	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH010**
Lab Sample Id: 620474-002

Matrix: Soil
Date Collected: 04.04.19 11.00

Date Received: 04.09.19 12.09
Sample Depth: 80 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 10.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 10.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.10.19 10.02		
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.10.19 10.02		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH02B**
Lab Sample Id: 620474-003

Matrix: Soil
Date Collected: 04.04.19 14.30

Date Received: 04.09.19 12.09
Sample Depth: 15 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.9	25.0	mg/kg	04.10.19 10.57		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 01.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 01.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 01.31	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 01.31	
o-Terphenyl	84-15-1	93	%	70-135	04.10.19 01.31	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH02B**
Lab Sample Id: 620474-003

Matrix: Soil
Date Collected: 04.04.19 14.30

Date Received: 04.09.19 12.09
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 11.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 11.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	135	%	70-130	04.10.19 11.35	**	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.10.19 11.35		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH020**
Lab Sample Id: 620474-004

Matrix: Soil
Date Collected: 04.05.19 08.30

Date Received: 04.09.19 12.09
Sample Depth: 80 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<25.0	25.0	mg/kg	04.10.19 11.04	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 01.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	50.9	15.0	mg/kg	04.10.19 01.50		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.8	15.0	mg/kg	04.10.19 01.50		1
Total TPH	PHC635	67.7	15.0	mg/kg	04.10.19 01.50		1
Total GRO-DRO	PHC628	50.9	15.0	mg/kg	04.10.19 01.50		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	04.10.19 01.50	
o-Terphenyl	84-15-1	86	%	70-135	04.10.19 01.50	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH020**
Lab Sample Id: 620474-004

Matrix: Soil
Date Collected: 04.05.19 08.30

Date Received: 04.09.19 12.09
Sample Depth: 80 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 11.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 11.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 11.54		
4-Bromofluorobenzene	460-00-4	152	%	70-130	04.10.19 11.54	**	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH03**
Lab Sample Id: 620474-005

Matrix: Soil
Date Collected: 04.05.19 09.00

Date Received: 04.09.19 12.09
Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1000	125	mg/kg	04.10.19 11.11		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.10.19 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.10.19 02.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.10.19 02.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.10.19 02.09	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.10.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.10.19 02.09	
o-Terphenyl	84-15-1	95	%	70-135	04.10.19 02.09	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH03**
Lab Sample Id: 620474-005

Matrix: Soil
Date Collected: 04.05.19 09.00

Date Received: 04.09.19 12.09
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 12.13	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 12.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	137	%	70-130	04.10.19 12.13	**	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.10.19 12.13		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH03A**
Lab Sample Id: 620474-006

Matrix: Soil
Date Collected: 04.05.19 09.10

Date Received: 04.09.19 12.09
Sample Depth: 10 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	833	250	mg/kg	04.10.19 11.18		10

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 02.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 02.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 02.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 02.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	04.10.19 02.28	
o-Terphenyl	84-15-1	95	%	70-135	04.10.19 02.28	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH03A**
Lab Sample Id: 620474-006

Matrix: Soil
Date Collected: 04.05.19 09.10

Date Received: 04.09.19 12.09
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.10.19 12.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 12.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	121	%	70-130	04.10.19 12.32		
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 12.32		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04D**
Lab Sample Id: 620474-007

Matrix: Soil
Date Collected: 04.05.19 10.15

Date Received: 04.09.19 12.09
Sample Depth: 25 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.6	50.0	mg/kg	04.10.19 11.25		2

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 02.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 02.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 02.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 02.46	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 02.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.10.19 02.46	
o-Terphenyl	84-15-1	93	%	70-135	04.10.19 02.46	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04D**
Lab Sample Id: 620474-007

Matrix: Soil
Date Collected: 04.05.19 10.15

Date Received: 04.09.19 12.09
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.10.19 12.51	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.10.19 12.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 12.51		
4-Bromofluorobenzene	460-00-4	118	%	70-130	04.10.19 12.51		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04I**
Lab Sample Id: 620474-008

Matrix: Soil
Date Collected: 04.05.19 11.45

Date Received: 04.09.19 12.09
Sample Depth: 50 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	93.8	25.0	mg/kg	04.10.19 11.32		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 03.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	26.0	15.0	mg/kg	04.10.19 03.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 03.05	U	1
Total TPH	PHC635	26.0	15.0	mg/kg	04.10.19 03.05		1
Total GRO-DRO	PHC628	26.0	15.0	mg/kg	04.10.19 03.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 03.05	
o-Terphenyl	84-15-1	90	%	70-135	04.10.19 03.05	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04I**
Lab Sample Id: 620474-008

Matrix: Soil
Date Collected: 04.05.19 11.45

Date Received: 04.09.19 12.09
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 13.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 13.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.10.19 13.10		
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.10.19 13.10		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04C**
Lab Sample Id: 620474-009

Matrix: Soil
Date Collected: 04.05.19 12.45

Date Received: 04.09.19 12.09
Sample Depth: 20 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	240	25.0	mg/kg	04.10.19 11.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 03.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 03.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 03.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 03.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 03.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 03.24	
o-Terphenyl	84-15-1	94	%	70-135	04.10.19 03.24	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH04C**
Lab Sample Id: 620474-009

Matrix: Soil
Date Collected: 04.05.19 12.45

Date Received: 04.09.19 12.09
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 13.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 13.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	04.10.19 13.29		
1,4-Difluorobenzene	540-36-3	108	%	70-130	04.10.19 13.29		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH05E**
Lab Sample Id: 620474-010

Matrix: Soil
Date Collected: 04.05.19 13.00

Date Received: 04.09.19 12.09
Sample Depth: 30 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.2	25.0	mg/kg	04.10.19 11.53		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 03.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 03.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 03.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 03.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 03.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 03.43	
o-Terphenyl	84-15-1	94	%	70-135	04.10.19 03.43	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH05E**
Lab Sample Id: 620474-010

Matrix: Soil
Date Collected: 04.05.19 13.00

Date Received: 04.09.19 12.09
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.10.19 13.49	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.10.19 13.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	04.10.19 13.49		
4-Bromofluorobenzene	460-00-4	122	%	70-130	04.10.19 13.49		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH06**
Lab Sample Id: 620474-011

Matrix: Soil
Date Collected: 04.05.19 13.15

Date Received: 04.09.19 12.09
Sample Depth: 5 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	385	25.0	mg/kg	04.10.19 12.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 04.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 04.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 04.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 04.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 04.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.10.19 04.02	
o-Terphenyl	84-15-1	104	%	70-135	04.10.19 04.02	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH06**
Lab Sample Id: 620474-011

Matrix: Soil
Date Collected: 04.05.19 13.15

Date Received: 04.09.19 12.09
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.10.19 14.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 14.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	04.10.19 14.08		
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.10.19 14.08		



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH06E**
Lab Sample Id: 620474-012

Matrix: Soil
Date Collected: 04.05.19 13.55

Date Received: 04.09.19 12.09
Sample Depth: 30 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: RNL

Analyst: RNL

Seq Number: 3085165

Date Prep: 04.10.19 09.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	25.0	mg/kg	04.10.19 12.27		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085150

Date Prep: 04.09.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.10.19 04.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.10.19 04.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.10.19 04.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.10.19 04.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.10.19 04.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	04.10.19 04.21	
o-Terphenyl	84-15-1	93	%	70-135	04.10.19 04.21	



Certificate of Analytical Results 620474



LT Environmental, Inc., Arvada, CO

JRU 10 TB

Sample Id: **BH06E**
Lab Sample Id: 620474-012

Matrix: Soil
Date Collected: 04.05.19 13.55

Date Received: 04.09.19 12.09
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3085184

Date Prep: 04.09.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.10.19 14.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.10.19 14.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	134	%	70-130	04.10.19 14.27	**	
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.10.19 14.27		

- 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 620474

LT Environmental, Inc.

JRU 10 TB

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085165

MB Sample Id: 7675410-1-BLK

Matrix: Solid

LCS Sample Id: 7675410-1-BKS

Prep Method: E300P

Date Prep: 04.10.19

LCSD Sample Id: 7675410-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<25.0	250	257	103	255	102	90-110	1	20	mg/kg	04.10.19 10:09	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085165

Parent Sample Id: 620474-001

Matrix: Soil

MS Sample Id: 620474-001 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620474-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1580	250	2310	292	2310	292	80-120	0	20	mg/kg	04.10.19 10:37	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3085165

Parent Sample Id: 620474-011

Matrix: Soil

MS Sample Id: 620474-011 S

Prep Method: E300P

Date Prep: 04.10.19

MSD Sample Id: 620474-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	385	250	702	127	701	126	80-120	0	20	mg/kg	04.10.19 12:13	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085150

MB Sample Id: 7675424-1-BLK

Matrix: Solid

LCS Sample Id: 7675424-1-BKS

Prep Method: TX1005P

Date Prep: 04.09.19

LCSD Sample Id: 7675424-1-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	1170	117	1100	110	70-135	6	20	mg/kg	04.09.19 20:31	
Diesel Range Organics (DRO)	<8.13	1000	1180	118	1090	109	70-135	8	20	mg/kg	04.09.19 20:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		133		117		70-135	%	04.09.19 20:31
o-Terphenyl	107		125		109		70-135	%	04.09.19 20:31

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

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

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

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



QC Summary 620474

LT Environmental, Inc.

JRU 10 TB

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085150

Parent Sample Id: 620421-001

Matrix: Soil

MS Sample Id: 620421-001 S

Prep Method: TX1005P

Date Prep: 04.09.19

MSD Sample Id: 620421-001 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)	<8.00	1000	1020	102	1040	104	70-135	2	20	mg/kg	04.09.19 21:28	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1020	102	70-135	2	20	mg/kg	04.09.19 21:28	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		113		70-135	%	04.09.19 21:28
o-Terphenyl	97		98		70-135	%	04.09.19 21:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085184

MB Sample Id: 7675459-1-BLK

Matrix: Solid

LCS Sample Id: 7675459-1-BKS

Prep Method: SW5030B

Date Prep: 04.09.19

LCSD Sample Id: 7675459-1-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	0.0765	77	0.0731	74	70-130	5	35	mg/kg	04.09.19 23:18	
Toluene	<0.00200	0.100	0.0782	78	0.0751	76	70-130	4	35	mg/kg	04.09.19 23:18	
Ethylbenzene	<0.00200	0.100	0.0787	79	0.0755	76	70-130	4	35	mg/kg	04.09.19 23:18	
m,p-Xylenes	<0.00400	0.200	0.157	79	0.151	76	70-130	4	35	mg/kg	04.09.19 23:18	
o-Xylene	<0.00200	0.100	0.0817	82	0.0793	80	70-130	3	35	mg/kg	04.09.19 23:18	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		99		99		70-130	%	04.09.19 23:18
4-Bromofluorobenzene	107		102		102		70-130	%	04.09.19 23:18

Analytical Method: BTEX by EPA 8021B

Seq Number: 3085184

Parent Sample Id: 620421-001

Matrix: Soil

MS Sample Id: 620421-001 S

Prep Method: SW5030B

Date Prep: 04.09.19

MSD Sample Id: 620421-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0648	64	0.0491	49	70-130	28	35	mg/kg	04.09.19 23:56	X
Toluene	<0.00202	0.101	0.0620	61	0.0588	59	70-130	5	35	mg/kg	04.09.19 23:56	X
Ethylbenzene	<0.00202	0.101	0.0568	56	0.0559	56	70-130	2	35	mg/kg	04.09.19 23:56	X
m,p-Xylenes	0.00112	0.202	0.120	59	0.123	62	70-130	2	35	mg/kg	04.09.19 23:56	X
o-Xylene	<0.00202	0.101	0.0680	67	0.0703	71	70-130	3	35	mg/kg	04.09.19 23:56	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		92		70-130	%	04.09.19 23:56
4-Bromofluorobenzene	106		120		70-130	%	04.09.19 23:56

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

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

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

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



Chain of Custody

Work Order No:

10204714

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

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Page 1 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	bjeill@ltenv.com

Project Name:	TR-379, TR-346, TR-5243	Turn Around	Routine ☐ Rush: 24 hr
Project Number:			
P.O. Number:			
Sampler's Name:	Benjamin Beill	Due Date:	4/9/14

Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	05.04	Thermometer ID:	12
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.1
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:	
Sample Custody Seals:	Yes ☒ No ☐		

SAMPLE RECEIPT				ANALYSIS REQUEST												Work Order Notes	
Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐														
Temperature (°C):	05.04	Thermometer ID:	12														
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.1														
Cooler Custody Seals:	Yes ☒ No ☐	Total Containers:															
Sample Custody Seals:	Yes ☒ No ☐																
Sample Identification				Matrix	Date Sampled	Time Sampled	Depth	Number of Containers								Sample Comments	
								TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)							
BH01 F	S	4/3/19	10:10	35'				X	X	X							TAT starts the day received by the lab, if received by 4:30pm
BH01 O		4/4/19	11:00	80'				X	X	X							
BH02 B		4/4/19	14:30	15'				X	X	X							
BH02 O		4/5/19	08:30	80'				X	X	X							
BH03			06:00	5'				X	X	X							
BH03 A			09:10	10'				X	X	X							
BH04 D			10:15	25'				X	X	X							
BH04 I			11:45	50'				X	X	X							
BH05 C			12:45	20'				X	X	X							
BH05 E			13:00	30'				X	X	X							

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		4-5-19 1650			4/6/19
					1001

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
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Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813)
Hobbs, NM (575-392-7550)

www.xenco.com Page 2 of 2

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	bbelliii@ltenv.com

Work Order Comments	
Program: UST/PST ☐ PRP ☐ brownfields ☐ RC ☐ superfund ☐	State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	SR010 1A	Turn Around	ANALYSIS REQUEST	Work Order Notes
Project Number:	2A0-3179-288-3164, 288-5243	Route: ☐		
P.O. Number:		Rush: 24 hr		
Sampler's Name:	Benjamin Beill	Due Date: 4/9/19		
SAMPLE RECEIPT				
Temperature (°C):	0.500	Temp Blank: Yes ☐ No ☒	Wet Ice: Yes ☐ No ☒	Thermometer ID: 120
Received Intact:	Yes ☒ No ☐			
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Correction Factor: -0.1		
Sample Custody Seals:	Yes ☐ No ☒ N/A	Total Containers:		
Number of Containers				
EPA 8015)				
EPA 0-8021)				
e (EPA 300.0)				
TAT starts the day received by the lab, if received by 4:30pm				

[illegible]

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

1631 / 245.1 / 7470 / 7471 : Hg

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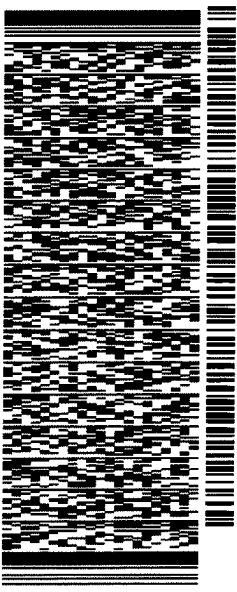
Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	4-5-19 @ 16:50	2 <i>[Signature]</i>	<i>[Signature]</i>	4/9/19
3			4		1809
5			6		

ORIGIN ID:CAOA (575) 887-6245
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PAC N MAIL
910 W PIERCE ST
CARLSBAD, NM 88220
UNITED STATES US

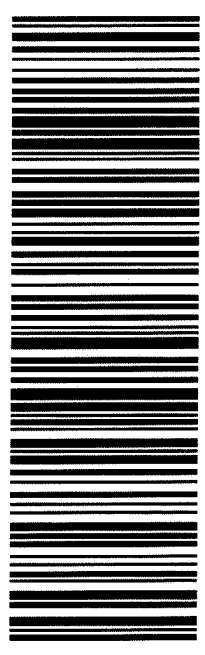
SHIP DATE: 08APR19
ACTWGT: 37.00 LB
CAD: 101813706NET4100
DMS: 26x14x15 IN
BILL RECIPIENT

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FEDEX EXPRESS SHIP CENTER
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MIDLAND TX 79711
(806) 794-1296
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PO: DEPT:




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Inter-Office Shipment

Page 1 of 1

IOS Number **126219**

Date/Time: 04/09/19 13:03

Created by: Brianna Teel

Please send report to: Kalei Stout

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: FED 774927932079

E-Mail: kalei.stout@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
620474-001	S	BH01F	04/03/19 10:10	E300	Inorganic Anions by EPA 300	04/10/19	05/01/19	KLS	CL	
620474-002	S	BH010	04/04/19 11:00	E300	Inorganic Anions by EPA 300	04/10/19	05/02/19	KLS	CL	
620474-003	S	BH02B	04/04/19 14:30	E300	Inorganic Anions by EPA 300	04/10/19	05/02/19	KLS	CL	
620474-004	S	BH020	04/05/19 08:30	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-005	S	BH03	04/05/19 09:00	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-006	S	BH03A	04/05/19 09:10	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-007	S	BH04D	04/05/19 10:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-008	S	BH04I	04/05/19 11:45	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-009	S	BH04C	04/05/19 12:45	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-010	S	BH05E	04/05/19 13:00	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-011	S	BH06	04/05/19 13:15	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	
620474-012	S	BH06E	04/05/19 13:55	E300	Inorganic Anions by EPA 300	04/10/19	05/03/19	KLS	CL	

Inter Office Shipment or Sample Comments:

Relinquished By: Brianna Teel
Brianna Teel

Date Relinquished: 04/09/2019

Received By: Ashley Derstine
Ashley Derstine

Date Received: 04/10/2019 09:15

Cooler Temperature: 2.7



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 126219

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R3

Sent By: Brianna Teel

Date Sent: 04/09/2019 01:03 PM

Received By: Ashley Derstine

Date Received: 04/10/2019 09:15 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	2.7
#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:

Ashley Derstine

Date: 04/10/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 04/09/2019 12:09:00 PM

Work Order #: 620474

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)?	.4
#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: 04/09/2019

Checklist reviewed by:

Kalei Stout

Date: 04/09/2019

Analytical Report 621048

for
LT Environmental, Inc.

Project Manager: Adrian Baker

JRU 10

2RP-3179,2RP-3464,2RP-5243

23-APR-19

Collected By: Client



1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
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-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



23-APR-19

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

Reference: XENCO Report No(s): **621048**
JRU 10
Project Address: Delaware Basin

Adrian Baker:

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) 621048. 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. 621048 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,

Kalei Stout

Midland Laboratory Director

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Sample Cross Reference 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW06	S	04-11-19 09:45	0 - 4 ft	621048-001
SW07	S	04-11-19 10:50	0 - 4 ft	621048-002
SW08	S	04-11-19 12:00	0 - 4 ft	621048-003
SW09	S	04-11-19 13:00	0 - 4 ft	621048-004
SW10	S	04-11-19 13:30	0 - 4 ft	621048-005
SW11	S	04-11-19 13:40	0 - 4 ft	621048-006
SW12	S	04-11-19 14:15	0 - 4 ft	621048-007



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3179,2RP-3464,2RP-
Work Order Number(s): 621048

Report Date: 23-APR-19
Date Received: 04/15/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3086244 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 621048-002,621048-003,621048-007,621048-005,621048-006,621048-004.

Batch: LBA-3086466 Chloride by EPA 300

Lab Sample ID 621055-013 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD).

Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference.

Samples in the analytical batch are: 621048-006, -007.

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

Chloride Relative Percent Difference (RPD) between matrix spike and duplicate was above quality control limits.

Samples in the analytical batch are: 621048-006, -007



Certificate of Analysis Summary 621048

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179,2RP-3464,2RP-5243

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Mon Apr-15-19 07:45 am

Report Date: 23-APR-19

Project Manager: Kalei Stout

<i>Analysis Requested</i>	<i>Lab Id:</i>	621048-001	621048-002	621048-003	621048-004	621048-005	621048-006
	<i>Field Id:</i>	SW06	SW07	SW08	SW09	SW10	SW11
	<i>Depth:</i>	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Apr-11-19 09:45	Apr-11-19 10:50	Apr-11-19 12:00	Apr-11-19 13:00	Apr-11-19 13:30	Apr-11-19 13:40
BTEX by EPA 8021B	<i>Extracted:</i>	Apr-18-19 16:30	Apr-18-19 16:30	Apr-18-19 16:30	Apr-18-19 16:30	Apr-18-19 16:30	Apr-18-19 16:30
	<i>Analyzed:</i>	Apr-19-19 00:13	Apr-19-19 00:32	Apr-19-19 00:51	Apr-19-19 01:10	Apr-19-19 01:29	Apr-19-19 01:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00400 0.00400	<0.00400 0.00400	<0.00401 0.00401	<0.00397 0.00397	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	Apr-19-19 08:30	Apr-19-19 08:30	Apr-19-19 08:30	Apr-19-19 08:30	Apr-19-19 08:30	Apr-19-19 09:00
	<i>Analyzed:</i>	Apr-19-19 13:31	Apr-19-19 13:38	Apr-19-19 13:44	Apr-19-19 13:51	Apr-19-19 13:57	Apr-19-19 14:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		73.2 5.03	22.9 4.95	<5.00 5.00	<4.97 4.97	<5.00 5.00	5.47 4.97
TPH by SW8015 Mod	<i>Extracted:</i>	Apr-16-19 10:00	Apr-16-19 10:00	Apr-16-19 10:00	Apr-16-19 10:00	Apr-16-19 10:00	Apr-16-19 10:00
	<i>Analyzed:</i>	Apr-16-19 15:25	Apr-16-19 15:44	Apr-16-19 16:04	Apr-16-19 17:02	Apr-16-19 17:22	Apr-16-19 17:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Kalei Stout
Midland Laboratory Director



Certificate of Analysis Summary 621048

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179,2RP-3464,2RP-5243

Contact: Adrian Baker

Project Location: Delaware Basin

Date Received in Lab: Mon Apr-15-19 07:45 am

Report Date: 23-APR-19

Project Manager: Kalei Stout

Analysis Requested	Lab Id:	621048-007					
	Field Id:	SW12					
	Depth:	0-4 ft					
	Matrix:	SOIL					
	Sampled:	Apr-11-19 14:15					
BTEX by EPA 8021B	Extracted:	Apr-18-19 16:30					
	Analyzed:	Apr-19-19 02:07					
	Units/RL:	mg/kg RL					
	Benzene	<0.00199 0.00199					
	Toluene	<0.00199 0.00199					
	Ethylbenzene	<0.00199 0.00199					
	m,p-Xylenes	<0.00398 0.00398					
	o-Xylene	<0.00199 0.00199					
	Total Xylenes	<0.00199 0.00199					
	Total BTEX	<0.00199 0.00199					
Chloride by EPA 300	Extracted:	Apr-19-19 09:00					
	Analyzed:	Apr-19-19 14:55					
	Units/RL:	mg/kg RL					
Chloride		<4.97 4.97					
TPH by SW8015 Mod	Extracted:	Apr-16-19 10:00					
	Analyzed:	Apr-16-19 18:01					
	Units/RL:	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<14.9 14.9					
Diesel Range Organics (DRO)		<14.9 14.9					
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9					
Total TPH		<14.9 14.9					
Total GRO-DRO		<14.9 14.9					

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Kalei Stout
Midland Laboratory Director



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW06**
Lab Sample Id: 621048-001

Matrix: Soil
Date Collected: 04.11.19 09.45

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086464

Date Prep: 04.19.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.2	5.03	mg/kg	04.19.19 13.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 15.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 15.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 15.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 15.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 15.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	04.16.19 15.25	
o-Terphenyl	84-15-1	104	%	70-135	04.16.19 15.25	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW06**
Lab Sample Id: 621048-001

Matrix: Soil
Date Collected: 04.11.19 09.45

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.18.19 16.30

Basis: Wet Weight

Seq Number: 3086244

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.19.19 00.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 00.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.19.19 00.13		
4-Bromofluorobenzene	460-00-4	126	%	70-130	04.19.19 00.13		



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW07**
Lab Sample Id: 621048-002

Matrix: Soil
Date Collected: 04.11.19 10.50

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086464

Date Prep: 04.19.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.9	4.95	mg/kg	04.19.19 13.38		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 15.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 15.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 15.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 15.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 15.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.16.19 15.44	
o-Terphenyl	84-15-1	105	%	70-135	04.16.19 15.44	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW07**
Lab Sample Id: 621048-002

Matrix: Soil
Date Collected: 04.11.19 10.50

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086244

Date Prep: 04.18.19 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.19.19 00.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 00.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	149	%	70-130	04.19.19 00.32	**	
1,4-Difluorobenzene	540-36-3	93	%	70-130	04.19.19 00.32		



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW08**
Lab Sample Id: 621048-003

Matrix: Soil
Date Collected: 04.11.19 12.00

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086464

Date Prep: 04.19.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	04.19.19 13.44	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 16.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 16.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 16.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 16.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 16.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	04.16.19 16.04	
o-Terphenyl	84-15-1	108	%	70-135	04.16.19 16.04	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW08**
Lab Sample Id: 621048-003

Matrix: Soil
Date Collected: 04.11.19 12.00

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086244

Date Prep: 04.18.19 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.19.19 00.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 00.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.19.19 00.51		
4-Bromofluorobenzene	460-00-4	144	%	70-130	04.19.19 00.51	**	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW09**
Lab Sample Id: 621048-004

Matrix: Soil
Date Collected: 04.11.19 13.00

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086464

Date Prep: 04.19.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	04.19.19 13.51	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 17.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 17.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 17.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 17.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 17.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.16.19 17.02	
o-Terphenyl	84-15-1	104	%	70-135	04.16.19 17.02	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW09**
Lab Sample Id: 621048-004

Matrix: Soil
Date Collected: 04.11.19 13.00

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086244

Date Prep: 04.18.19 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.19.19 01.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.19.19 01.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	205	%	70-130	04.19.19 01.10	**	
1,4-Difluorobenzene	540-36-3	117	%	70-130	04.19.19 01.10		



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW10**
Lab Sample Id: 621048-005

Matrix: Soil
Date Collected: 04.11.19 13.30

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086464

Date Prep: 04.19.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	04.19.19 13.57	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 17.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 17.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 17.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.16.19 17.22	
o-Terphenyl	84-15-1	106	%	70-135	04.16.19 17.22	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW10**
Lab Sample Id: 621048-005

Matrix: Soil
Date Collected: 04.11.19 13.30

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086244

Date Prep: 04.18.19 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.19.19 01.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.19.19 01.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.19.19 01.29		
4-Bromofluorobenzene	460-00-4	156	%	70-130	04.19.19 01.29	**	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW11**
Lab Sample Id: 621048-006

Matrix: Soil
Date Collected: 04.11.19 13.40

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086466

Date Prep: 04.19.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.47	4.97	mg/kg	04.19.19 14.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	04.16.19 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	04.16.19 17.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.16.19 17.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.16.19 17.42	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	04.16.19 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.16.19 17.42	
o-Terphenyl	84-15-1	103	%	70-135	04.16.19 17.42	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW11**
Lab Sample Id: 621048-006

Matrix: Soil
Date Collected: 04.11.19 13.40

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 04.18.19 16.30

Basis: Wet Weight

Seq Number: 3086244

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.19.19 01.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.19.19 01.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	121	%	70-130	04.19.19 01.48		
4-Bromofluorobenzene	460-00-4	146	%	70-130	04.19.19 01.48	**	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW12**
Lab Sample Id: 621048-007

Matrix: Soil
Date Collected: 04.11.19 14.15

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3086466

Date Prep: 04.19.19 09.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	04.19.19 14.55	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3085985

Date Prep: 04.16.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	04.16.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	04.16.19 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.16.19 18.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.16.19 18.01	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	04.16.19 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.16.19 18.01	
o-Terphenyl	84-15-1	106	%	70-135	04.16.19 18.01	



Certificate of Analytical Results 621048



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **SW12**
Lab Sample Id: 621048-007

Matrix: Soil
Date Collected: 04.11.19 14.15

Date Received: 04.15.19 07.45
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3086244

Date Prep: 04.18.19 16.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.19.19 02.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.19.19 02.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	151	%	70-130	04.19.19 02.07	**	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.19.19 02.07		

- 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 621048

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3086464

MB Sample Id: 7676098-1-BLK

Matrix: Solid

LCS Sample Id: 7676098-1-BKS

Prep Method: E300P

Date Prep: 04.19.19

LCSD Sample Id: 7676098-1-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	238	95	241	96	90-110	1	20	mg/kg	04.19.19 10:11	

Analytical Method: Chloride by EPA 300

Seq Number: 3086466

MB Sample Id: 7676100-1-BLK

Matrix: Solid

LCS Sample Id: 7676100-1-BKS

Prep Method: E300P

Date Prep: 04.19.19

LCSD Sample Id: 7676100-1-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	250	100	254	102	90-110	2	20	mg/kg	04.19.19 14:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3086464

Parent Sample Id: 620911-004

Matrix: Soil

MS Sample Id: 620911-004 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 620911-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	29.6	252	192	64	255	89	90-110	28	20	mg/kg	04.19.19 10:31	XF

Analytical Method: Chloride by EPA 300

Seq Number: 3086464

Parent Sample Id: 620983-016

Matrix: Soil

MS Sample Id: 620983-016 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 620983-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	11.8	252	180	67	245	93	90-110	31	20	mg/kg	04.19.19 12:33	XF

Analytical Method: Chloride by EPA 300

Seq Number: 3086466

Parent Sample Id: 621048-006

Matrix: Soil

MS Sample Id: 621048-006 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621048-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.47	249	172	67	246	97	90-110	35	20	mg/kg	04.19.19 14:42	XF

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 621048

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3086466

Parent Sample Id: 621055-013

Matrix: Soil

MS Sample Id: 621055-013 S

Prep Method: E300P

Date Prep: 04.19.19

MSD Sample Id: 621055-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	184	248	354	69	350	67	90-110	1	20	mg/kg	04.22.19 10:46	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085985

MB Sample Id: 7675908-1-BLK

Matrix: Solid

LCS Sample Id: 7675908-1-BKS

Prep Method: TX1005P

Date Prep: 04.16.19

LCSD Sample Id: 7675908-1-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	975	98	1010	101	70-135	4	20	mg/kg	04.16.19 11:51	
Diesel Range Organics (DRO)	<8.13	1000	1000	100	1020	102	70-135	2	20	mg/kg	04.16.19 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		126		129		70-135	%	04.16.19 11:51
o-Terphenyl	114		119		125		70-135	%	04.16.19 11:51

Analytical Method: TPH by SW8015 Mod

Seq Number: 3085985

Parent Sample Id: 621042-001

Matrix: Soil

MS Sample Id: 621042-001 S

Prep Method: TX1005P

Date Prep: 04.16.19

MSD Sample Id: 621042-001 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)	12.3	997	1010	100	1020	101	70-135	1	20	mg/kg	04.16.19 12:49	
Diesel Range Organics (DRO)	<8.10	997	1070	107	1080	108	70-135	1	20	mg/kg	04.16.19 12:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	127		125		70-135	%	04.16.19 12:49
o-Terphenyl	114		121		70-135	%	04.16.19 12:49

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

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

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 621048

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3086244

MB Sample Id: 7676130-1-BLK

Matrix: Solid

LCS Sample Id: 7676130-1-BKS

Prep Method: SW5030B

Date Prep: 04.18.19

LCSD Sample Id: 7676130-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0805	80	0.0806	81	70-130	0	35	mg/kg	04.18.19 17:57	
Toluene	<0.00202	0.101	0.0874	87	0.0872	87	70-130	0	35	mg/kg	04.18.19 17:57	
Ethylbenzene	<0.00202	0.101	0.0941	93	0.0939	94	70-130	0	35	mg/kg	04.18.19 17:57	
m,p-Xylenes	<0.00102	0.202	0.194	96	0.192	96	70-130	1	35	mg/kg	04.18.19 17:57	
o-Xylene	<0.00202	0.101	0.0986	98	0.0974	98	70-130	1	35	mg/kg	04.18.19 17:57	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		94		93		70-130	%	04.18.19 17:57
4-Bromofluorobenzene	109		107		105		70-130	%	04.18.19 17:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3086244

Parent Sample Id: 621548-002

Matrix: Soil

MS Sample Id: 621548-002 S

Prep Method: SW5030B

Date Prep: 04.18.19

MSD Sample Id: 621548-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0775	78	0.0735	74	70-130	5	35	mg/kg	04.18.19 18:35	
Toluene	<0.000454	0.0996	0.0789	79	0.0766	77	70-130	3	35	mg/kg	04.18.19 18:35	
Ethylbenzene	<0.000563	0.0996	0.0798	80	0.0771	77	70-130	3	35	mg/kg	04.18.19 18:35	
m,p-Xylenes	<0.00101	0.199	0.163	82	0.158	79	70-130	3	35	mg/kg	04.18.19 18:35	
o-Xylene	<0.000343	0.0996	0.0831	83	0.0811	81	70-130	2	35	mg/kg	04.18.19 18:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	04.18.19 18:35
4-Bromofluorobenzene	111		116		70-130	%	04.18.19 18:35

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

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

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

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



Chain of Custody

Work Order No: 121019

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)565-3443 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:	Adrian Baker	Bill to: (if different)	Kyle Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.704.5178	Email:	bbellil@ltenv.com

Work Order Comments	
Program: UST/ST	☐ PRP ☐ Brownfields ☐ RC ☐ Superfund
State of Project:	
Reporting Level: I	☐ Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables:	EDD ☐ ADAPT ☐ Other:

Project Name:	TRU 10	Turn Around		ANALYSIS REQUEST	Work Order Notes
Project Number:	288-3179, 288-3464, 288-5243	Routine	☒		
P.O. Number:		Rush:			
Sampler's Name:	Benjamin Beill	Due Date:	4/22/14		
SAMPLE RECEIPT		Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
Temperature (°C):	2.2/2.1	Thermometer ID			
Received Intact:	Yes No	Correction Factor:			
Cooler Custody Seals:	Yes No N/A	Total Containers:			
Sample Custody Seals:	Yes No N/A				

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride	Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
SW06	5	4-11-19	0945	0'-4'	1	X	X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<u>[Signature]</u>	<u>[Signature]</u>	4/11/14	<u>[Signature]</u>	<u>[Signature]</u>	4-12-19 @ 12:05

7749 5974 0059

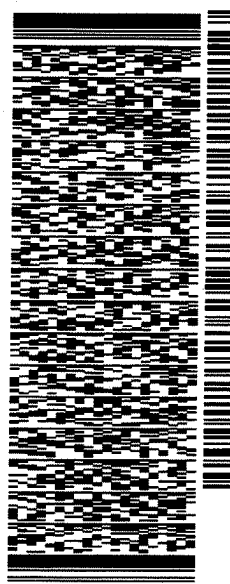
ORIGIN ID:CAOA (281) 240-4200
SAMPLE CUSTODY
SAMPLE CUSTODY
1089 N CANAL ST
CARLSBAD, NM 88220
UNITED STATES US

SHIP DATE: 12APR19
ACTWGT: 15.00 LB
CAD: 11448876/NET4100
DIMS: 13x9x9 IN
BILL SENDER

TO SAMPLE RECEIVING MIDLAND
FEDEX OFFICE PRINT & SHIP CENTER
FEDEX OFFICE PRINT & SHIP CENTER
200 W INTERSTATE 20

MIDLAND TX 79701
(432) 704-5440
REF:
INV:
PO:
DEPT:

565J1/D7E5/23AD

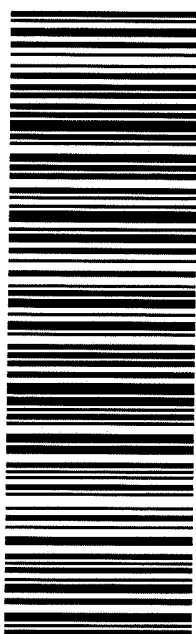


J191019019701ur

TRK#
0201 7749 5971 0659

SATURDAY HOLD
PRIORITY OVERNIGHT
HLD

41 MAFA
MAFKI
TX-US LBB



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XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 04/15/2019 07:45:00 AM

Work Order #: 621048

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)?	2.1
#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: 04/15/2019

Checklist reviewed by:

Kalei Stout

Date: 04/15/2019

Analytical Report 625762

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU 10

2RP3179,2RP-3464,2RP-5243

30-MAY-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)

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)



30-MAY-19

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

Reference: XENCO Report No(s): **625762**
JRU 10
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) 625762. 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. 625762 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
Project Assistant

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



Sample Cross Reference 625762



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH07K	S	05-21-19 11:20	60 ft	625762-001
BH08O	S	05-22-19 14:40	47 ft	625762-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP3179,2RP-3464,2RP-4
Work Order Number(s): 625762

Report Date: 30-MAY-19
Date Received: 05/29/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090594 BTEX by EPA 8021B

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



Certificate of Analysis Summary 625762

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP3179,2RP-3464,2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 30-MAY-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625762-001	625762-002				
	Field Id:	BH07K	BH08O				
	Depth:	60- ft	47- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	May-21-19 11:20	May-22-19 14:40				
BTEX by EPA 8021B	Extracted:	May-29-19 14:30	May-29-19 14:30				
	Analyzed:	May-30-19 00:10	May-30-19 00:29				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00202 0.00202	<0.00199 0.00199				
Toluene		<0.00202 0.00202	<0.00199 0.00199				
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199				
m,p-Xylenes		<0.00403 0.00403	<0.00398 0.00398				
o-Xylene		<0.00202 0.00202	<0.00199 0.00199				
Total Xylenes		<0.00202 0.00202	<0.00199 0.00199				
Total BTEX		<0.00202 0.00202	<0.00199 0.00199				
Chloride by EPA 300	Extracted:	May-29-19 15:30	May-29-19 15:30				
	Analyzed:	May-29-19 19:32	May-29-19 19:54				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		10.2 5.03	9.51 4.99				
TPH by SW8015 Mod	Extracted:	May-29-19 17:00	May-29-19 17:00				
	Analyzed:	May-30-19 03:33	May-30-19 03:54				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0				
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				
Total GRO-DRO		<15.0 15.0	<15.0 15.0				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625762



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07K**
Lab Sample Id: 625762-001

Matrix: Soil
Date Collected: 05.21.19 11.20

Date Received: 05.29.19 12.15
Sample Depth: 60 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090539

Date Prep: 05.29.19 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.2	5.03	mg/kg	05.29.19 19.32		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090591

Date Prep: 05.29.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.30.19 03.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.30.19 03.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.30.19 03.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.30.19 03.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.30.19 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.30.19 03.33	
o-Terphenyl	84-15-1	90	%	70-135	05.30.19 03.33	



Certificate of Analytical Results 625762



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07K**
Lab Sample Id: 625762-001

Matrix: Soil
Date Collected: 05.21.19 11.20

Date Received: 05.29.19 12.15
Sample Depth: 60 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090594

Date Prep: 05.29.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.30.19 00.10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.30.19 00.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.30.19 00.10		
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.30.19 00.10		



Certificate of Analytical Results 625762



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH080**
Lab Sample Id: 625762-002

Matrix: Soil
Date Collected: 05.22.19 14.40

Date Received: 05.29.19 12.15
Sample Depth: 47 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090539

Date Prep: 05.29.19 15.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.51	4.99	mg/kg	05.29.19 19.54		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090591

Date Prep: 05.29.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.30.19 03.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.30.19 03.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.30.19 03.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.30.19 03.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.30.19 03.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.30.19 03.54	
o-Terphenyl	84-15-1	91	%	70-135	05.30.19 03.54	



Certificate of Analytical Results 625762



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH080**
Lab Sample Id: 625762-002

Matrix: Soil
Date Collected: 05.22.19 14.40

Date Received: 05.29.19 12.15
Sample Depth: 47 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090594

Date Prep: 05.29.19 14.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.30.19 00.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.30.19 00.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	05.30.19 00.29		
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.30.19 00.29		

- 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 625762

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090539

MB Sample Id: 7678781-1-BLK

Matrix: Solid

LCS Sample Id: 7678781-1-BKS

Prep Method: E300P

Date Prep: 05.29.19

LCSD Sample Id: 7678781-1-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	230	92	232	93	90-110	1	20	mg/kg	05.29.19 19:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3090539

Parent Sample Id: 625762-001

Matrix: Soil

MS Sample Id: 625762-001 S

Prep Method: E300P

Date Prep: 05.29.19

MSD Sample Id: 625762-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.2	252	263	100	263	100	90-110	0	20	mg/kg	05.29.19 19:40	

Analytical Method: Chloride by EPA 300

Seq Number: 3090539

Parent Sample Id: 625764-007

Matrix: Soil

MS Sample Id: 625764-007 S

Prep Method: E300P

Date Prep: 05.29.19

MSD Sample Id: 625764-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.89	281	284	98	286	99	90-110	1	20	mg/kg	05.29.19 21:21	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090591

MB Sample Id: 7678858-1-BLK

Matrix: Solid

LCS Sample Id: 7678858-1-BKS

Prep Method: TX1005P

Date Prep: 05.29.19

LCSD Sample Id: 7678858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	1000	1090	109	1100	110	70-135	1	20	mg/kg	05.29.19 21:26	
Diesel Range Organics (DRO)	10.9	1000	1010	101	1010	101	70-135	0	20	mg/kg	05.29.19 21:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		120		123		70-135	%	05.29.19 21:26
o-Terphenyl	100		114		116		70-135	%	05.29.19 21:26

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

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

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

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



QC Summary 625762

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090591

Parent Sample Id: 625763-001

Matrix: Soil

MS Sample Id: 625763-001 S

Prep Method: TX1005P

Date Prep: 05.29.19

MSD Sample Id: 625763-001 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)	13.9	1000	1100	109	1100	109	70-135	0	20	mg/kg	05.29.19 22:24	
Diesel Range Organics (DRO)	238	1000	1140	90	1150	91	70-135	1	20	mg/kg	05.29.19 22:24	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	05.29.19 22:24
o-Terphenyl	113		105		70-135	%	05.29.19 22:24

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090594

MB Sample Id: 7678786-1-BLK

Matrix: Solid

LCS Sample Id: 7678786-1-BKS

Prep Method: SW5030B

Date Prep: 05.29.19

LCSD Sample Id: 7678786-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.107	106	0.110	110	70-130	3	35	mg/kg	05.29.19 21:40	
Toluene	<0.000458	0.101	0.0993	98	0.101	101	70-130	2	35	mg/kg	05.29.19 21:40	
Ethylbenzene	<0.000568	0.101	0.105	104	0.106	106	70-130	1	35	mg/kg	05.29.19 21:40	
m,p-Xylenes	<0.00102	0.201	0.215	107	0.220	111	70-130	2	35	mg/kg	05.29.19 21:40	
o-Xylene	<0.000346	0.101	0.106	105	0.109	109	70-130	3	35	mg/kg	05.29.19 21:40	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		103		106		70-130	%	05.29.19 21:40
4-Bromofluorobenzene	81		95		103		70-130	%	05.29.19 21:40

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090594

Parent Sample Id: 625761-001

Matrix: Soil

MS Sample Id: 625761-001 S

Prep Method: SW5030B

Date Prep: 05.29.19

MSD Sample Id: 625761-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0958	96	0.0952	95	70-130	1	35	mg/kg	05.29.19 22:18	
Toluene	<0.000456	0.100	0.0854	85	0.0837	84	70-130	2	35	mg/kg	05.29.19 22:18	
Ethylbenzene	<0.000565	0.100	0.0831	83	0.0803	80	70-130	3	35	mg/kg	05.29.19 22:18	
m,p-Xylenes	<0.00101	0.200	0.169	85	0.162	81	70-130	4	35	mg/kg	05.29.19 22:18	
o-Xylene	<0.000344	0.100	0.0838	84	0.0808	81	70-130	4	35	mg/kg	05.29.19 22:18	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		106		70-130	%	05.29.19 22:18
4-Bromofluorobenzene	99		104		70-130	%	05.29.19 22:18

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

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

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



Page 1 of 1

Work Order Comments	
Program: UST/PST ☐ RRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	

1631 / 245.1 / 7470 / 7471 : Hg

Date/Time

2	

2	1



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625762

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)?	.4
#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?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	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: 05/29/2019

Checklist reviewed by:

Kalei Stout

Date: 05/29/2019

Analytical Report 625765

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU 10

2RP-3179, 2RP-3464, 2RP-5243

05-JUN-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)

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)



05-JUN-19

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

Reference: XENCO Report No(s): **625765**
JRU 10
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) 625765. 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. 625765 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
Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH07	S	05-21-19 09:25	5 ft	625765-001
BH07A	S	05-21-19 09:35	10 ft	625765-002
BH07B	S	05-21-19 09:40	15 ft	625765-003
BH07C	S	05-21-19 09:45	20 ft	625765-004
BH07D	S	05-21-19 10:00	25 ft	625765-005
BH07E	S	05-21-19 10:10	30 ft	625765-006
BH07F	S	05-21-19 10:20	35 ft	625765-007
BH07G	S	05-21-19 10:30	40 ft	625765-008
BH07H	S	05-21-19 10:50	45 ft	625765-009
BH07I	S	05-21-19 11:00	50 ft	625765-010
BH07J	S	05-21-19 11:10	55 ft	625765-011



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3179, 2RP-3464, 2RI
Work Order Number(s): 625765

Report Date: 05-JUN-19
Date Received: 05/29/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090707 Chloride by EPA 300

Lab Sample ID 625766-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625765-007, -008, -009, -010, -011.

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

Batch: LBA-3090888 BTEX by EPA 8021B

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

Batch: LBA-3091245 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 625765-005, 625765-007.



Certificate of Analysis Summary 625765

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 05-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625765-001	625765-002	625765-003	625765-004	625765-005	625765-006
	Field Id:	BH07	BH07A	BH07B	BH07C	BH07D	BH07E
	Depth:	5- ft	10- ft	15- ft	20- ft	25- ft	30- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-21-19 09:25	May-21-19 09:35	May-21-19 09:40	May-21-19 09:45	May-21-19 10:00	May-21-19 10:10
BTEX by EPA 8021B	Extracted:	May-31-19 16:45	May-31-19 16:45	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	May-31-19 16:45
	Analyzed:	Jun-01-19 20:53	Jun-01-19 21:12	Jun-04-19 18:09	Jun-04-19 18:28	Jun-04-19 18:47	Jun-01-19 22:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.504 0.504	<0.499 0.499	<0.00201 0.00201	<0.00199 0.00199	0.0830 0.0200	<0.498 0.498
Toluene		<0.504 0.504	<0.499 0.499	<0.00201 0.00201	<0.00199 0.00199	0.0412 0.0200	0.610 0.498
Ethylbenzene		1.87 0.504	2.04 0.499	<0.00201 0.00201	<0.00199 0.00199	0.636 0.0200	4.28 0.498
m,p-Xylenes		4.66 1.01	5.03 0.998	<0.00402 0.00402	<0.00398 0.00398	1.07 0.0400	10.6 0.996
o-Xylene		1.55 0.504	1.63 0.499	<0.00201 0.00201	<0.00199 0.00199	0.325 0.0200	3.23 0.498
Total Xylenes		6.21 0.504	6.66 0.499	<0.00201 0.00201	<0.00199 0.00199	1.40 0.0200	13.8 0.498
Total BTEX		8.08 0.504	8.70 0.499	<0.00201 0.00201	<0.00199 0.00199	2.16 0.0200	18.7 0.498
Chloride by EPA 300	Extracted:	May-30-19 10:00	May-30-19 10:00	May-30-19 10:00	May-30-19 10:00	May-30-19 10:00	May-30-19 10:00
	Analyzed:	May-30-19 13:41	May-30-19 13:47	May-30-19 13:52	May-30-19 13:57	May-30-19 14:02	May-30-19 14:07
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1080 4.97	1290 5.01	521 5.03	324 4.98	204 4.96	61.5 5.04
TPH by SW8015 Mod	Extracted:	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00
	Analyzed:	Jun-01-19 13:10	Jun-01-19 14:09	Jun-01-19 14:29	Jun-01-19 14:48	Jun-01-19 15:08	Jun-01-19 15:28
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		835 15.0	1050 15.0	62.0 15.0	17.3 15.0	251 15.0	1760 15.0
Diesel Range Organics (DRO)		1200 15.0	1450 15.0	166 15.0	24.2 15.0	335 15.0	2420 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		2040 15.0	2500 15.0	228 15.0	41.5 15.0	586 15.0	4180 15.0
Total GRO-DRO		2040 15.0	2500 15.0	228 15.0	41.5 15.0	586 15.0	4180 15.0

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625765

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 05-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625765-007	625765-008	625765-009	625765-010	625765-011	
	Field Id:	BH07F	BH07G	BH07H	BH07I	BH07J	
	Depth:	35- ft	40- ft	45- ft	50- ft	55- ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	May-21-19 10:20	May-21-19 10:30	May-21-19 10:50	May-21-19 11:00	May-21-19 11:10	
BTEX by EPA 8021B	Extracted:	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	
	Analyzed:	Jun-04-19 16:14	Jun-04-19 16:33	Jun-04-19 16:52	Jun-04-19 17:12	Jun-04-19 17:31	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
m,p-Xylenes		<0.00401 0.00401	0.00449 0.00400	<0.00399 0.00399	<0.00403 0.00403	<0.00398 0.00398	
o-Xylene		<0.00200 0.00200	0.00202 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
Total Xylenes		<0.00200 0.00200	0.00651 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
Total BTEX		<0.00200 0.00200	0.00651 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	
Chloride by EPA 300	Extracted:	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	
	Analyzed:	May-30-19 14:38	May-30-19 14:54	May-30-19 14:59	May-30-19 15:04	May-31-19 12:43	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		38.4 5.00	48.2 4.95	22.4 5.04	11.9 4.99	15.4 5.01	
TPH by SW8015 Mod	Extracted:	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	Jun-01-19 08:00	
	Analyzed:	Jun-01-19 15:48	Jun-01-19 16:08	Jun-01-19 16:28	Jun-01-19 16:48	Jun-01-19 17:28	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	16.3 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		22.4 15.0	25.2 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	
Total TPH		22.4 15.0	41.5 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	
Total GRO-DRO		22.4 15.0	41.5 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07**
Lab Sample Id: 625765-001

Matrix: Soil
Date Collected: 05.21.19 09.25

Date Received: 05.29.19 12.15
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1080	4.97	mg/kg	05.30.19 13.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	835	15.0	mg/kg	06.01.19 13.10		1
Diesel Range Organics (DRO)	C10C28DRO	1200	15.0	mg/kg	06.01.19 13.10		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 13.10	U	1
Total TPH	PHC635	2040	15.0	mg/kg	06.01.19 13.10		1
Total GRO-DRO	PHC628	2040	15.0	mg/kg	06.01.19 13.10		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	06.01.19 13.10	
o-Terphenyl	84-15-1	99	%	70-135	06.01.19 13.10	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07**
Lab Sample Id: 625765-001

Matrix: Soil
Date Collected: 05.21.19 09.25

Date Received: 05.29.19 12.15
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090888

Prep Method: SW5030B

% Moisture:

Date Prep: 05.31.19 16.45

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.504	0.504	mg/kg	06.01.19 20.53	U	250
Toluene	108-88-3	<0.504	0.504	mg/kg	06.01.19 20.53	U	250
Ethylbenzene	100-41-4	1.87	0.504	mg/kg	06.01.19 20.53		250
m,p-Xylenes	179601-23-1	4.66	1.01	mg/kg	06.01.19 20.53		250
o-Xylene	95-47-6	1.55	0.504	mg/kg	06.01.19 20.53		250
Total Xylenes	1330-20-7	6.21	0.504	mg/kg	06.01.19 20.53		250
Total BTEX		8.08	0.504	mg/kg	06.01.19 20.53		250
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	06.01.19 20.53		
1,4-Difluorobenzene	540-36-3	87	%	70-130	06.01.19 20.53		



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07A**
Lab Sample Id: 625765-002

Matrix: Soil
Date Collected: 05.21.19 09.35

Date Received: 05.29.19 12.15
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1290	5.01	mg/kg	05.30.19 13.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1050	15.0	mg/kg	06.01.19 14.09		1
Diesel Range Organics (DRO)	C10C28DRO	1450	15.0	mg/kg	06.01.19 14.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 14.09	U	1
Total TPH	PHC635	2500	15.0	mg/kg	06.01.19 14.09		1
Total GRO-DRO	PHC628	2500	15.0	mg/kg	06.01.19 14.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	06.01.19 14.09	
o-Terphenyl	84-15-1	102	%	70-135	06.01.19 14.09	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07A**
Lab Sample Id: 625765-002

Matrix: Soil
Date Collected: 05.21.19 09.35

Date Received: 05.29.19 12.15
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090888

Date Prep: 05.31.19 16.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.499	0.499	mg/kg	06.01.19 21.12	U	250
Toluene	108-88-3	<0.499	0.499	mg/kg	06.01.19 21.12	U	250
Ethylbenzene	100-41-4	2.04	0.499	mg/kg	06.01.19 21.12		250
m,p-Xylenes	179601-23-1	5.03	0.998	mg/kg	06.01.19 21.12		250
o-Xylene	95-47-6	1.63	0.499	mg/kg	06.01.19 21.12		250
Total Xylenes	1330-20-7	6.66	0.499	mg/kg	06.01.19 21.12		250
Total BTEX		8.70	0.499	mg/kg	06.01.19 21.12		250
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		117	%	70-130	06.01.19 21.12	
1,4-Difluorobenzene	540-36-3		86	%	70-130	06.01.19 21.12	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07B**
Lab Sample Id: 625765-003

Matrix: Soil
Date Collected: 05.21.19 09.40

Date Received: 05.29.19 12.15
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	521	5.03	mg/kg	05.30.19 13.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	62.0	15.0	mg/kg	06.01.19 14.29		1
Diesel Range Organics (DRO)	C10C28DRO	166	15.0	mg/kg	06.01.19 14.29		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 14.29	U	1
Total TPH	PHC635	228	15.0	mg/kg	06.01.19 14.29		1
Total GRO-DRO	PHC628	228	15.0	mg/kg	06.01.19 14.29		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.01.19 14.29	
o-Terphenyl	84-15-1	91	%	70-135	06.01.19 14.29	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07B**
Lab Sample Id: 625765-003

Matrix: Soil
Date Collected: 05.21.19 09.40

Date Received: 05.29.19 12.15
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.04.19 18.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.04.19 18.09	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		123	%	70-130	06.04.19 18.09	
1,4-Difluorobenzene	540-36-3		104	%	70-130	06.04.19 18.09	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07C**
Lab Sample Id: 625765-004

Matrix: Soil
Date Collected: 05.21.19 09.45

Date Received: 05.29.19 12.15
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	324	4.98	mg/kg	05.30.19 13.57		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	17.3	15.0	mg/kg	06.01.19 14.48		1
Diesel Range Organics (DRO)	C10C28DRO	24.2	15.0	mg/kg	06.01.19 14.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 14.48	U	1
Total TPH	PHC635	41.5	15.0	mg/kg	06.01.19 14.48		1
Total GRO-DRO	PHC628	41.5	15.0	mg/kg	06.01.19 14.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.01.19 14.48	
o-Terphenyl	84-15-1	92	%	70-135	06.01.19 14.48	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07C**
Lab Sample Id: 625765-004

Matrix: Soil
Date Collected: 05.21.19 09.45

Date Received: 05.29.19 12.15
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.04.19 18.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.04.19 18.28	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		109	%	70-130	06.04.19 18.28	
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.04.19 18.28	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07D**
Lab Sample Id: 625765-005

Matrix: Soil
Date Collected: 05.21.19 10.00

Date Received: 05.29.19 12.15
Sample Depth: 25 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	204	4.96	mg/kg	05.30.19 14.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	251	15.0	mg/kg	06.01.19 15.08		1
Diesel Range Organics (DRO)	C10C28DRO	335	15.0	mg/kg	06.01.19 15.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 15.08	U	1
Total TPH	PHC635	586	15.0	mg/kg	06.01.19 15.08		1
Total GRO-DRO	PHC628	586	15.0	mg/kg	06.01.19 15.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	06.01.19 15.08	
o-Terphenyl	84-15-1	94	%	70-135	06.01.19 15.08	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07D**
Lab Sample Id: 625765-005

Matrix: Soil
Date Collected: 05.21.19 10.00

Date Received: 05.29.19 12.15
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0830	0.0200	mg/kg	06.04.19 18.47		10
Toluene	108-88-3	0.0412	0.0200	mg/kg	06.04.19 18.47		10
Ethylbenzene	100-41-4	0.636	0.0200	mg/kg	06.04.19 18.47		10
m,p-Xylenes	179601-23-1	1.07	0.0400	mg/kg	06.04.19 18.47		10
o-Xylene	95-47-6	0.325	0.0200	mg/kg	06.04.19 18.47		10
Total Xylenes	1330-20-7	1.40	0.0200	mg/kg	06.04.19 18.47		10
Total BTEX		2.16	0.0200	mg/kg	06.04.19 18.47		10
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106		%	70-130	06.04.19 18.47	
4-Bromofluorobenzene	460-00-4	175		%	70-130	06.04.19 18.47	**



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07E**
Lab Sample Id: 625765-006

Matrix: Soil
Date Collected: 05.21.19 10.10

Date Received: 05.29.19 12.15
Sample Depth: 30 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090696

Date Prep: 05.30.19 10.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.5	5.04	mg/kg	05.30.19 14.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1760	15.0	mg/kg	06.01.19 15.28		1
Diesel Range Organics (DRO)	C10C28DRO	2420	15.0	mg/kg	06.01.19 15.28		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 15.28	U	1
Total TPH	PHC635	4180	15.0	mg/kg	06.01.19 15.28		1
Total GRO-DRO	PHC628	4180	15.0	mg/kg	06.01.19 15.28		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	06.01.19 15.28	
o-Terphenyl	84-15-1	100	%	70-135	06.01.19 15.28	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07E**
Lab Sample Id: 625765-006

Matrix: Soil
Date Collected: 05.21.19 10.10

Date Received: 05.29.19 12.15
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3090888

Date Prep: 05.31.19 16.45

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.498	0.498	mg/kg	06.01.19 22.28	U	250
Toluene	108-88-3	0.610	0.498	mg/kg	06.01.19 22.28		250
Ethylbenzene	100-41-4	4.28	0.498	mg/kg	06.01.19 22.28		250
m,p-Xylenes	179601-23-1	10.6	0.996	mg/kg	06.01.19 22.28		250
o-Xylene	95-47-6	3.23	0.498	mg/kg	06.01.19 22.28		250
Total Xylenes	1330-20-7	13.8	0.498	mg/kg	06.01.19 22.28		250
Total BTEX		18.7	0.498	mg/kg	06.01.19 22.28		250
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	86		%	70-130	06.01.19 22.28	
4-Bromofluorobenzene	460-00-4	127		%	70-130	06.01.19 22.28	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07F**
Lab Sample Id: 625765-007

Matrix: Soil
Date Collected: 05.21.19 10.20

Date Received: 05.29.19 12.15
Sample Depth: 35 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	38.4	5.00	mg/kg	05.30.19 14.38		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.01.19 15.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	22.4	15.0	mg/kg	06.01.19 15.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 15.48	U	1
Total TPH	PHC635	22.4	15.0	mg/kg	06.01.19 15.48		1
Total GRO-DRO	PHC628	22.4	15.0	mg/kg	06.01.19 15.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.01.19 15.48	
o-Terphenyl	84-15-1	92	%	70-135	06.01.19 15.48	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07F**
Lab Sample Id: 625765-007

Matrix: Soil
Date Collected: 05.21.19 10.20

Date Received: 05.29.19 12.15
Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.04.19 16.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.04.19 16.14	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		137	%	70-130	06.04.19 16.14	**
1,4-Difluorobenzene	540-36-3		100	%	70-130	06.04.19 16.14	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07G**
Lab Sample Id: 625765-008

Matrix: Soil
Date Collected: 05.21.19 10.30

Date Received: 05.29.19 12.15
Sample Depth: 40 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	48.2	4.95	mg/kg	05.30.19 14.54		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	16.3	15.0	mg/kg	06.01.19 16.08		1
Diesel Range Organics (DRO)	C10C28DRO	25.2	15.0	mg/kg	06.01.19 16.08		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 16.08	U	1
Total TPH	PHC635	41.5	15.0	mg/kg	06.01.19 16.08		1
Total GRO-DRO	PHC628	41.5	15.0	mg/kg	06.01.19 16.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.01.19 16.08	
o-Terphenyl	84-15-1	97	%	70-135	06.01.19 16.08	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07G**
Lab Sample Id: 625765-008

Matrix: Soil
Date Collected: 05.21.19 10.30

Date Received: 05.29.19 12.15
Sample Depth: 40 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.04.19 16.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.04.19 16.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.04.19 16.33	U	1
m,p-Xylenes	179601-23-1	0.00449	0.00400	mg/kg	06.04.19 16.33		1
o-Xylene	95-47-6	0.00202	0.00200	mg/kg	06.04.19 16.33		1
Total Xylenes	1330-20-7	0.00651	0.00200	mg/kg	06.04.19 16.33		1
Total BTEX		0.00651	0.00200	mg/kg	06.04.19 16.33		1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		107	%	70-130	06.04.19 16.33	
4-Bromofluorobenzene	460-00-4		113	%	70-130	06.04.19 16.33	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07H**
Lab Sample Id: 625765-009

Matrix: Soil
Date Collected: 05.21.19 10.50

Date Received: 05.29.19 12.15
Sample Depth: 45 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.4	5.04	mg/kg	05.30.19 14.59		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.01.19 16.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.01.19 16.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.01.19 16.28	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.01.19 16.28	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.01.19 16.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.01.19 16.28	
o-Terphenyl	84-15-1	92	%	70-135	06.01.19 16.28	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07H**
Lab Sample Id: 625765-009

Matrix: Soil
Date Collected: 05.21.19 10.50

Date Received: 05.29.19 12.15
Sample Depth: 45 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.04.19 16.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.04.19 16.52	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		110	%	70-130	06.04.19 16.52	
4-Bromofluorobenzene	460-00-4		107	%	70-130	06.04.19 16.52	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07I**
Lab Sample Id: 625765-010

Matrix: Soil
Date Collected: 05.21.19 11.00

Date Received: 05.29.19 12.15
Sample Depth: 50 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.9	4.99	mg/kg	05.30.19 15.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.01.19 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.01.19 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 16.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.01.19 16.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.01.19 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.01.19 16.48	
o-Terphenyl	84-15-1	90	%	70-135	06.01.19 16.48	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07I**
Lab Sample Id: 625765-010

Matrix: Soil
Date Collected: 05.21.19 11.00

Date Received: 05.29.19 12.15
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Seq Number: 3091245

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.04.19 17.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.04.19 17.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.04.19 17.12		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.04.19 17.12		



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07J**
Lab Sample Id: 625765-011

Matrix: Soil
Date Collected: 05.21.19 11.10

Date Received: 05.29.19 12.15
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.4	5.01	mg/kg	05.31.19 12.43		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090918

Date Prep: 06.01.19 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.01.19 17.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.01.19 17.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 17.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.01.19 17.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.01.19 17.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.01.19 17.28	
o-Terphenyl	84-15-1	88	%	70-135	06.01.19 17.28	



Certificate of Analytical Results 625765



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH07J**
Lab Sample Id: 625765-011

Matrix: Soil
Date Collected: 05.21.19 11.10

Date Received: 05.29.19 12.15
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.04.19 17.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.04.19 17.31	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		110	%	70-130	06.04.19 17.31	
4-Bromofluorobenzene	460-00-4		105	%	70-130	06.04.19 17.31	

- 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 625765

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090696

MB Sample Id: 7678862-1-BLK

Matrix: Solid

LCS Sample Id: 7678862-1-BKS

Prep Method: E300P

Date Prep: 05.30.19

LCSD Sample Id: 7678862-1-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	272	109	272	109	90-110	0	20	mg/kg	05.30.19 11:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

MB Sample Id: 7678864-1-BLK

Matrix: Solid

LCS Sample Id: 7678864-1-BKS

Prep Method: E300P

Date Prep: 05.30.19

LCSD Sample Id: 7678864-1-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	262	105	261	104	90-110	0	20	mg/kg	05.30.19 14:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3090696

Parent Sample Id: 625776-013

Matrix: Soil

MS Sample Id: 625776-013 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625776-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	243	253	532	114	528	113	90-110	1	20	mg/kg	05.30.19 11:53	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090696

Parent Sample Id: 625809-001

Matrix: Soil

MS Sample Id: 625809-001 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625809-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	220	250	501	112	500	112	90-110	0	20	mg/kg	05.30.19 13:05	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

Parent Sample Id: 625765-007

Matrix: Soil

MS Sample Id: 625765-007 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625765-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	38.4	250	316	111	324	114	90-110	3	20	mg/kg	05.30.19 14:43	X

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 625765

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

Parent Sample Id: 625766-006

Matrix: Soil

MS Sample Id: 625766-006 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625766-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	154	250	435	112	436	113	90-110	0	20	mg/kg	05.30.19 15:50	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090918

MB Sample Id: 7679064-1-BLK

Matrix: Solid

LCS Sample Id: 7679064-1-BKS

Prep Method: TX1005P

Date Prep: 06.01.19

LCSD Sample Id: 7679064-1-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	1170	117	1200	120	70-135	3	20	mg/kg	06.01.19 12:31	
Diesel Range Organics (DRO)	<8.13	1000	1140	114	1170	117	70-135	3	20	mg/kg	06.01.19 12:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		124		122		70-135	%	06.01.19 12:31
o-Terphenyl	96		103		105		70-135	%	06.01.19 12:31

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090918

Parent Sample Id: 625765-001

Matrix: Soil

MS Sample Id: 625765-001 S

Prep Method: TX1005P

Date Prep: 06.01.19

MSD Sample Id: 625765-001 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)	835	996	1740	91	1720	89	70-135	1	20	mg/kg	06.01.19 13:30	
Diesel Range Organics (DRO)	1200	996	2070	87	2050	85	70-135	1	20	mg/kg	06.01.19 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		113		70-135	%	06.01.19 13:30
o-Terphenyl	100		95		70-135	%	06.01.19 13:30

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090888

MB Sample Id: 7679056-1-BLK

Matrix: Solid

LCS Sample Id: 7679056-1-BKS

Prep Method: SW5030B

Date Prep: 05.31.19

LCSD Sample Id: 7679056-1-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	0.0998	0.0738	74	0.0918	91	70-130	22	35	mg/kg	06.01.19 13:39	
Toluene	<0.00200	0.0998	0.0765	77	0.0931	92	70-130	20	35	mg/kg	06.01.19 13:39	
Ethylbenzene	<0.00200	0.0998	0.0842	84	0.102	101	70-130	19	35	mg/kg	06.01.19 13:39	
m,p-Xylenes	<0.00399	0.200	0.178	89	0.216	107	70-130	19	35	mg/kg	06.01.19 13:39	
o-Xylene	<0.00200	0.0998	0.0886	89	0.105	104	70-130	17	35	mg/kg	06.01.19 13:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		91		90		70-130	%	06.01.19 13:39
4-Bromofluorobenzene	103		103		99		70-130	%	06.01.19 13:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

MB Sample Id: 7679256-1-BLK

Matrix: Solid

LCS Sample Id: 7679256-1-BKS

Prep Method: SW5030B

Date Prep: 06.04.19

LCSD Sample Id: 7679256-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.112	112	0.108	109	70-130	4	35	mg/kg	06.04.19 14:00	
Toluene	<0.00199	0.0996	0.101	101	0.0973	98	70-130	4	35	mg/kg	06.04.19 14:00	
Ethylbenzene	<0.00199	0.0996	0.106	106	0.102	103	70-130	4	35	mg/kg	06.04.19 14:00	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.201	101	70-130	3	35	mg/kg	06.04.19 14:00	
o-Xylene	<0.00199	0.0996	0.102	102	0.0985	99	70-130	3	35	mg/kg	06.04.19 14:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		103		102		70-130	%	06.04.19 14:00
4-Bromofluorobenzene	98		94		95		70-130	%	06.04.19 14:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3090888

Parent Sample Id: 625612-012

Matrix: Soil

MS Sample Id: 625612-012 S

Prep Method: SW5030B

Date Prep: 05.31.19

MSD Sample Id: 625612-012 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	0.0888	90	0.0819	81	70-130	8	35	mg/kg	06.01.19 14:17	
Toluene	<0.00198	0.0992	0.0532	54	0.0492	49	70-130	8	35	mg/kg	06.01.19 14:17	X
Ethylbenzene	<0.00198	0.0992	0.0699	70	0.0659	65	70-130	6	35	mg/kg	06.01.19 14:17	X
m,p-Xylenes	<0.00397	0.198	0.128	65	0.123	61	70-130	4	35	mg/kg	06.01.19 14:17	X
o-Xylene	<0.00198	0.0992	0.0881	89	0.0867	86	70-130	2	35	mg/kg	06.01.19 14:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		94		70-130	%	06.01.19 14:17
4-Bromofluorobenzene	104		104		70-130	%	06.01.19 14:17

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

Parent Sample Id: 625896-001

Matrix: Soil

MS Sample Id: 625896-001 S

Prep Method: SW5030B

Date Prep: 06.04.19

MSD Sample Id: 625896-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0857	86	0.0757	76	70-130	12	35	mg/kg	06.04.19 14:38	
Toluene	<0.00200	0.0998	0.0778	78	0.0699	70	70-130	11	35	mg/kg	06.04.19 14:38	
Ethylbenzene	<0.00200	0.0998	0.0812	81	0.0712	72	70-130	13	35	mg/kg	06.04.19 14:38	
m,p-Xylenes	<0.00399	0.200	0.161	81	0.142	72	70-130	13	35	mg/kg	06.04.19 14:38	
o-Xylene	<0.00200	0.0998	0.0789	79	0.0695	70	70-130	13	35	mg/kg	06.04.19 14:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	06.04.19 14:38
4-Bromofluorobenzene	97		99		70-130	%	06.04.19 14:38

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

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

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

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

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 1 of 2

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

Work Order Comments			
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐			
State of Project:			
Reporting Level II	☐ Level III	☐ ST/UST	☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐	ADAPT	☐ Other: ☐

Project Name:	JRU 10	Turn Around	
Project Number:	ZRP-3179, ZRP-3464, ZRP-5243	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	
SAMPLE RECEIPT			
Temperature (°C):	0.0 / 10.9	Temp Blank:	Yes ☒ No ☐
Received Intact:	(yes) No	Thermometer ID	V88
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.12
Sample Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
Number of Containers			
A 8015)			
(PA 0=8021)			
(EPA 300.0)			
TAT starts the day received by the lab. if received by 4:30pm			
Work Order Notes			

[illegible]

Total 200.7 / 6010 200.8 / 6020:

8RCRA 13PPN

Texas 11 Al Sb

As Ba Be B

Ca Cr Ca

Cu Fe Pb Ni

Mn Mo Ni

See An Sin

Na Sr Ti Sr

11 V 75

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

TCLP / SPLP

8RCRA Sb

S Ba Be Co

Cr Co Cu P

Mn Mo Ni S

Aq Ti U

631 / 245 1 /

170 / 7471 : R

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and sub-contractors. 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
		5/24/19 @ 1640			5/24/19 195

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Midland, TX (432-704-5440) El Paso, TX (915)565-3443 Lubbock, TX (806)794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 251-1111
Hobbs, NM (575-392-7550)

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Page 2 of 2

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

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting Level I ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	JRU 10	Turn Around
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine ☒
P.O. Number:		Rush:
Sampler's Name:	Benjamin Beill	Due Date:

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	06/10.9	Thermomage (°C)					
Received In tact:	Yes No						
Cooler Custody Seals:	Yes No	N/A			Correction Factor:		
Sample Custody Seals:	Yes (No) N/A	Total Containers:					

[illegible][illegible]

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

8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Ti	Sn	U	V	Zn
TCLP/SPLP 6010:			8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U											
			1631 / 245.1 / 7470 / 7471 : Hg																											

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/24/19 16:40			5/24/19 16:45



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625765

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)?	.4
#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: 05/29/2019

Checklist reviewed by:

Kalei Stout

Date: 05/29/2019

Analytical Report 625766

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU 10

2RP-3179, 2RP-3464, 2RP-5243

05-JUN-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)

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)



05-JUN-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **625766**

JRU 10

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) 625766. 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. 625766 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

Project Assistant

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

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



Sample Cross Reference 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH08	S	05-21-19 11:35	5 ft	625766-001
BH08A	S	05-21-19 11:40	10 ft	625766-002
BH08B	S	05-21-19 11:45	15 ft	625766-003
BH08C	S	05-21-19 12:00	20 ft	625766-004
BH08D	S	05-21-19 12:10	22 ft	625766-005
BH08E	S	05-21-19 12:20	25 ft	625766-006
BH08F	S	05-21-19 12:30	30 ft	625766-007
BH08G	S	05-21-19 12:40	35 ft	625766-008
BH08H	S	05-21-19 12:45	40 ft	625766-009
BH08I	S	05-21-19 12:55	45 ft	625766-010
BH08J	S	05-21-19 13:10	50 ft	625766-011
BH08K	S	05-21-19 13:20	55 ft	625766-012
BH08L	S	05-21-19 13:35	60 ft	625766-013
BH08M	S	05-21-19 14:00	65 ft	625766-014
BH08N	S	05-21-19 14:20	70 ft	625766-015



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3179, 2RP-3464, 2RI
Work Order Number(s): 625766

Report Date: 05-JUN-19
Date Received: 05/29/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090707 Chloride by EPA 300

Lab Sample ID 625766-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625766-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015.

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

Batch: LBA-3091082 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 625766-012, 625766-011.

Batch: LBA-3091245 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 625766-002, 625766-010, 625766-009, 625766-004.

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



Certificate of Analysis Summary 625766

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 05-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625766-001	625766-002	625766-003	625766-004	625766-005	625766-006
	Field Id:	BH08	BH08A	BH08B	BH08C	BH08D	BH08E
	Depth:	5- ft	10- ft	15- ft	20- ft	22- ft	25- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-21-19 11:35	May-21-19 11:40	May-21-19 11:45	May-21-19 12:00	May-21-19 12:10	May-21-19 12:20
BTEX by EPA 8021B	Extracted:	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30	Jun-04-19 13:30
	Analyzed:	Jun-04-19 20:58	Jun-04-19 21:36	Jun-04-19 21:17	Jun-04-19 21:55	Jun-04-19 20:20	Jun-04-19 20:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.402 0.402	<0.199 0.199	<0.402 0.402	<0.200 0.200	<2.00 2.00	<9.92 9.92
Toluene		<0.402 0.402	0.360 0.199	0.496 0.402	0.295 0.200	2.53 2.00	<9.92 9.92
Ethylbenzene		1.99 0.402	2.60 0.199	3.17 0.402	2.90 0.200	10.2 2.00	19.0 9.92
m,p-Xylenes		5.10 0.805	7.59 0.398	10.2 0.803	9.21 0.399	32.1 4.01	55.7 19.8
o-Xylene		1.69 0.402	2.89 0.199	3.71 0.402	3.25 0.200	9.35 2.00	16.5 9.92
Total Xylenes		6.79 0.402	10.5 0.199	13.9 0.402	12.5 0.200	41.5 2.00	72.2 9.92
Total BTEX		8.78 0.402	13.4 0.199	17.6 0.402	15.7 0.200	54.2 2.00	91.2 9.92
Chloride by EPA 300	Extracted:	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30
	Analyzed:	May-30-19 15:09	May-30-19 15:24	May-30-19 15:30	May-30-19 15:35	May-30-19 15:40	May-30-19 15:45
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1410 5.00	1610 24.8	1960 25.1	1380 4.99	343 4.97	154 5.00
TPH by SW8015 Mod	Extracted:	Jun-01-19 10:00	Jun-01-19 10:00	Jun-01-19 10:00	Jun-01-19 10:00	Jun-01-19 10:00	Jun-01-19 10:00
	Analyzed:	Jun-02-19 00:20	Jun-02-19 00:40	Jun-02-19 00:59	Jun-02-19 01:19	Jun-02-19 08:08	Jun-02-19 08:27
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		1240 15.0	987 15.0	1470 15.0	834 15.0	5330 74.7	9740 74.9
Diesel Range Organics (DRO)		1640 15.0	1340 15.0	1530 15.0	1100 15.0	4940 74.7	7060 74.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<74.7 74.7	<74.9 74.9
Total TPH		2880 15.0	2330 15.0	3000 15.0	1930 15.0	10300 74.7	16800 74.9
Total GRO-DRO		2880 15.0	2330 15.0	3000 15.0	1930 15.0	10300 74.7	16800 74.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625766

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 05-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625766-007		625766-008		625766-009		625766-010		625766-011		625766-012	
	Field Id:	BH08F		BH08G		BH08H		BH08I		BH08J		BH08K	
	Depth:	30- ft		35- ft		40- ft		45- ft		50- ft		55- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-21-19 12:30		May-21-19 12:40		May-21-19 12:45		May-21-19 12:55		May-21-19 13:10		May-21-19 13:20	
BTEX by EPA 8021B	Extracted:	Jun-04-19 13:30		Jun-04-19 13:30		Jun-04-19 13:30		Jun-04-19 13:30		Jun-03-19 17:15		Jun-03-19 17:15	
	Analyzed:	Jun-04-19 20:39		Jun-04-19 17:50		Jun-04-19 22:14		Jun-04-19 22:33		Jun-04-19 21:19		Jun-04-19 21:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.504	0.504	<0.00199	0.00199	<0.201	0.201	0.0539	0.0497	0.0884	0.0501	<0.00201	0.00201
Toluene		0.638	0.504	<0.00199	0.00199	0.297	0.201	<0.0497	0.0497	0.113	0.0501	<0.00201	0.00201
Ethylbenzene		3.38	0.504	<0.00199	0.00199	2.01	0.201	0.569	0.0497	0.163	0.0501	0.00931	0.00201
m,p-Xylenes		10.7	1.01	0.00579	0.00398	6.16	0.402	1.43	0.0994	2.62	0.100	0.126	0.00402
o-Xylene		3.02	0.504	0.00330	0.00199	1.84	0.201	0.498	0.0497	0.824	0.0501	0.0416	0.00201
Total Xylenes		13.7	0.504	0.00909	0.00199	8.00	0.201	1.93	0.0497	3.44	0.0501	0.168	0.00201
Total BTEX		17.7	0.504	0.00909	0.00199	10.3	0.201	2.55	0.0497	3.81	0.0501	0.177	0.00201
Chloride by EPA 300	Extracted:	May-30-19 10:30		May-30-19 10:30		May-30-19 10:30		May-30-19 10:30		May-30-19 10:30		May-30-19 10:30	
	Analyzed:	May-30-19 16:00		May-30-19 16:06		May-30-19 16:11		May-30-19 16:26		May-30-19 16:31		May-30-19 16:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		42.3	5.02	<4.96	4.96	<5.01	5.01	21.2	4.98	17.4	5.05	22.2	5.00
TPH by SW8015 Mod	Extracted:	Jun-01-19 10:00		Jun-01-19 10:00		Jun-01-19 10:00		Jun-01-19 10:00		Jun-01-19 10:00		Jun-01-19 10:00	
	Analyzed:	Jun-02-19 02:37		Jun-02-19 02:57		Jun-02-19 03:16		Jun-02-19 03:36		Jun-02-19 03:56		Jun-02-19 04:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		2510	15.0	18.0	14.9	853	15.0	565	15.0	437	15.0	109	15.0
Diesel Range Organics (DRO)		2740	15.0	110	14.9	1510	15.0	1390	15.0	871	15.0	407	15.0
Motor Oil Range Hydrocarbons (MRO)		28.1	15.0	<14.9	14.9	16.7	15.0	15.7	15.0	<15.0	15.0	<15.0	15.0
Total TPH		5280	15.0	128	14.9	2380	15.0	1970	15.0	1310	15.0	516	15.0
Total GRO-DRO		5250	15.0	128	14.9	2360	15.0	1960	15.0	1310	15.0	516	15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625766

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm

Report Date: 05-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625766-013	625766-014	625766-015			
	Field Id:	BH08L	BH08M	BH08N			
	Depth:	60- ft	65- ft	70- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	May-21-19 13:35	May-21-19 14:00	May-21-19 14:20			
BTEX by EPA 8021B	Extracted:	Jun-03-19 17:15	Jun-03-19 17:15	Jun-03-19 17:15			
	Analyzed:	Jun-04-19 21:38	Jun-04-19 19:03	Jun-04-19 19:22			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.0504 0.0504	<0.00199 0.00199	<0.00199 0.00199			
Toluene		<0.0504 0.0504	<0.00199 0.00199	<0.00199 0.00199			
Ethylbenzene		0.338 0.0504	<0.00199 0.00199	<0.00199 0.00199			
m,p-Xylenes		<0.101 0.101	<0.00398 0.00398	<0.00398 0.00398			
o-Xylene		0.0554 0.0504	<0.00199 0.00199	<0.00199 0.00199			
Total Xylenes		0.0554 0.0504	<0.00199 0.00199	<0.00199 0.00199			
Total BTEX		0.393 0.0504	<0.00199 0.00199	<0.00199 0.00199			
Chloride by EPA 300	Extracted:	May-30-19 10:30	May-30-19 10:30	May-30-19 10:30			
	Analyzed:	May-30-19 16:42	May-30-19 16:47	May-30-19 16:52			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		514 4.99	13.5 4.96	13.2 5.02			
TPH by SW8015 Mod	Extracted:	Jun-01-19 10:00	Jun-01-19 10:00	Jun-01-19 10:00			
	Analyzed:	Jun-02-19 04:35	Jun-02-19 04:55	Jun-02-19 05:15			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		425 15.0	<15.0 15.0	<15.0 15.0			
Diesel Range Organics (DRO)		460 15.0	<15.0 15.0	<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0			
Total TPH		885 15.0	<15.0 15.0	<15.0 15.0			
Total GRO-DRO		885 15.0	<15.0 15.0	<15.0 15.0			

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08**
Lab Sample Id: 625766-001

Matrix: Soil
Date Collected: 05.21.19 11.35

Date Received: 05.29.19 12.15
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1410	5.00	mg/kg	05.30.19 15.09		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1240	15.0	mg/kg	06.02.19 00.20		1
Diesel Range Organics (DRO)	C10C28DRO	1640	15.0	mg/kg	06.02.19 00.20		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 00.20	U	1
Total TPH	PHC635	2880	15.0	mg/kg	06.02.19 00.20		1
Total GRO-DRO	PHC628	2880	15.0	mg/kg	06.02.19 00.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	06.02.19 00.20	
o-Terphenyl	84-15-1	106	%	70-135	06.02.19 00.20	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08**
Lab Sample Id: 625766-001

Matrix: Soil
Date Collected: 05.21.19 11.35

Date Received: 05.29.19 12.15
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.402	0.402	mg/kg	06.04.19 20.58	U	200
Toluene	108-88-3	<0.402	0.402	mg/kg	06.04.19 20.58	U	200
Ethylbenzene	100-41-4	1.99	0.402	mg/kg	06.04.19 20.58		200
m,p-Xylenes	179601-23-1	5.10	0.805	mg/kg	06.04.19 20.58		200
o-Xylene	95-47-6	1.69	0.402	mg/kg	06.04.19 20.58		200
Total Xylenes	1330-20-7	6.79	0.402	mg/kg	06.04.19 20.58		200
Total BTEX		8.78	0.402	mg/kg	06.04.19 20.58		200
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97		%	70-130	06.04.19 20.58	
4-Bromofluorobenzene	460-00-4	116		%	70-130	06.04.19 20.58	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08A**
Lab Sample Id: 625766-002

Matrix: Soil
Date Collected: 05.21.19 11.40

Date Received: 05.29.19 12.15
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1610	24.8	mg/kg	05.30.19 15.24		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	987	15.0	mg/kg	06.02.19 00.40		1
Diesel Range Organics (DRO)	C10C28DRO	1340	15.0	mg/kg	06.02.19 00.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 00.40	U	1
Total TPH	PHC635	2330	15.0	mg/kg	06.02.19 00.40		1
Total GRO-DRO	PHC628	2330	15.0	mg/kg	06.02.19 00.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.02.19 00.40	
o-Terphenyl	84-15-1	98	%	70-135	06.02.19 00.40	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08A**
Lab Sample Id: 625766-002

Matrix: Soil
Date Collected: 05.21.19 11.40

Date Received: 05.29.19 12.15
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.199	0.199	mg/kg	06.04.19 21.36	U	100
Toluene	108-88-3	0.360	0.199	mg/kg	06.04.19 21.36		100
Ethylbenzene	100-41-4	2.60	0.199	mg/kg	06.04.19 21.36		100
m,p-Xylenes	179601-23-1	7.59	0.398	mg/kg	06.04.19 21.36		100
o-Xylene	95-47-6	2.89	0.199	mg/kg	06.04.19 21.36		100
Total Xylenes	1330-20-7	10.5	0.199	mg/kg	06.04.19 21.36		100
Total BTEX		13.4	0.199	mg/kg	06.04.19 21.36		100
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	150	%	70-130	06.04.19 21.36	**	
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.04.19 21.36		



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08B**
Lab Sample Id: 625766-003

Matrix: Soil
Date Collected: 05.21.19 11.45

Date Received: 05.29.19 12.15
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1960	25.1	mg/kg	05.30.19 15.30		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	1470	15.0	mg/kg	06.02.19 00.59		1
Diesel Range Organics (DRO)	C10C28DRO	1530	15.0	mg/kg	06.02.19 00.59		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 00.59	U	1
Total TPH	PHC635	3000	15.0	mg/kg	06.02.19 00.59		1
Total GRO-DRO	PHC628	3000	15.0	mg/kg	06.02.19 00.59		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	06.02.19 00.59	
o-Terphenyl	84-15-1	100	%	70-135	06.02.19 00.59	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08B**
Lab Sample Id: 625766-003

Matrix: Soil
Date Collected: 05.21.19 11.45

Date Received: 05.29.19 12.15
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.402	0.402	mg/kg	06.04.19 21.17	U	200
Toluene	108-88-3	0.496	0.402	mg/kg	06.04.19 21.17		200
Ethylbenzene	100-41-4	3.17	0.402	mg/kg	06.04.19 21.17		200
m,p-Xylenes	179601-23-1	10.2	0.803	mg/kg	06.04.19 21.17		200
o-Xylene	95-47-6	3.71	0.402	mg/kg	06.04.19 21.17		200
Total Xylenes	1330-20-7	13.9	0.402	mg/kg	06.04.19 21.17		200
Total BTEX		17.6	0.402	mg/kg	06.04.19 21.17		200
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96		%	70-130	06.04.19 21.17	
4-Bromofluorobenzene	460-00-4	123		%	70-130	06.04.19 21.17	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08C**
Lab Sample Id: 625766-004

Matrix: Soil
Date Collected: 05.21.19 12.00

Date Received: 05.29.19 12.15
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1380	4.99	mg/kg	05.30.19 15.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	834	15.0	mg/kg	06.02.19 01.19		1
Diesel Range Organics (DRO)	C10C28DRO	1100	15.0	mg/kg	06.02.19 01.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 01.19	U	1
Total TPH	PHC635	1930	15.0	mg/kg	06.02.19 01.19		1
Total GRO-DRO	PHC628	1930	15.0	mg/kg	06.02.19 01.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	06.02.19 01.19	
o-Terphenyl	84-15-1	98	%	70-135	06.02.19 01.19	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08C**
Lab Sample Id: 625766-004

Matrix: Soil
Date Collected: 05.21.19 12.00

Date Received: 05.29.19 12.15
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.200	0.200	mg/kg	06.04.19 21.55	U	100
Toluene	108-88-3	0.295	0.200	mg/kg	06.04.19 21.55		100
Ethylbenzene	100-41-4	2.90	0.200	mg/kg	06.04.19 21.55		100
m,p-Xylenes	179601-23-1	9.21	0.399	mg/kg	06.04.19 21.55		100
o-Xylene	95-47-6	3.25	0.200	mg/kg	06.04.19 21.55		100
Total Xylenes	1330-20-7	12.5	0.200	mg/kg	06.04.19 21.55		100
Total BTEX		15.7	0.200	mg/kg	06.04.19 21.55		100
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		99	%	70-130	06.04.19 21.55	
4-Bromofluorobenzene	460-00-4		147	%	70-130	06.04.19 21.55	**



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08D**
Lab Sample Id: 625766-005

Matrix: Soil
Date Collected: 05.21.19 12.10

Date Received: 05.29.19 12.15
Sample Depth: 22 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	4.97	mg/kg	05.30.19 15.40		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	5330	74.7	mg/kg	06.02.19 08.08		5
Diesel Range Organics (DRO)	C10C28DRO	4940	74.7	mg/kg	06.02.19 08.08		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<74.7	74.7	mg/kg	06.02.19 08.08	U	5
Total TPH	PHC635	10300	74.7	mg/kg	06.02.19 08.08		5
Total GRO-DRO	PHC628	10300	74.7	mg/kg	06.02.19 08.08		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	06.02.19 08.08	
o-Terphenyl	84-15-1	106	%	70-135	06.02.19 08.08	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08D**
Lab Sample Id: 625766-005

Matrix: Soil
Date Collected: 05.21.19 12.10

Date Received: 05.29.19 12.15
Sample Depth: 22 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<2.00	2.00	mg/kg	06.04.19 20.20	U	1000
Toluene	108-88-3	2.53	2.00	mg/kg	06.04.19 20.20		1000
Ethylbenzene	100-41-4	10.2	2.00	mg/kg	06.04.19 20.20		1000
m,p-Xylenes	179601-23-1	32.1	4.01	mg/kg	06.04.19 20.20		1000
o-Xylene	95-47-6	9.35	2.00	mg/kg	06.04.19 20.20		1000
Total Xylenes	1330-20-7	41.5	2.00	mg/kg	06.04.19 20.20		1000
Total BTEX		54.2	2.00	mg/kg	06.04.19 20.20		1000
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		100	%	70-130	06.04.19 20.20	
4-Bromofluorobenzene	460-00-4		111	%	70-130	06.04.19 20.20	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08E**
Lab Sample Id: 625766-006

Matrix: Soil
Date Collected: 05.21.19 12.20

Date Received: 05.29.19 12.15
Sample Depth: 25 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	154	5.00	mg/kg	05.30.19 15.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	9740	74.9	mg/kg	06.02.19 08.27		5
Diesel Range Organics (DRO)	C10C28DRO	7060	74.9	mg/kg	06.02.19 08.27		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<74.9	74.9	mg/kg	06.02.19 08.27	U	5
Total TPH	PHC635	16800	74.9	mg/kg	06.02.19 08.27		5
Total GRO-DRO	PHC628	16800	74.9	mg/kg	06.02.19 08.27		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	06.02.19 08.27	
o-Terphenyl	84-15-1	107	%	70-135	06.02.19 08.27	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08E**
Lab Sample Id: 625766-006

Matrix: Soil
Date Collected: 05.21.19 12.20

Date Received: 05.29.19 12.15
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<9.92	9.92	mg/kg	06.04.19 20.01	U	5000
Toluene	108-88-3	<9.92	9.92	mg/kg	06.04.19 20.01	U	5000
Ethylbenzene	100-41-4	19.0	9.92	mg/kg	06.04.19 20.01		5000
m,p-Xylenes	179601-23-1	55.7	19.8	mg/kg	06.04.19 20.01		5000
o-Xylene	95-47-6	16.5	9.92	mg/kg	06.04.19 20.01		5000
Total Xylenes	1330-20-7	72.2	9.92	mg/kg	06.04.19 20.01		5000
Total BTEX		91.2	9.92	mg/kg	06.04.19 20.01		5000
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.04.19 20.01		
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.04.19 20.01		



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08F**
Lab Sample Id: 625766-007

Matrix: Soil
Date Collected: 05.21.19 12.30

Date Received: 05.29.19 12.15
Sample Depth: 30 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.3	5.02	mg/kg	05.30.19 16.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2510	15.0	mg/kg	06.02.19 02.37		1
Diesel Range Organics (DRO)	C10C28DRO	2740	15.0	mg/kg	06.02.19 02.37		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	28.1	15.0	mg/kg	06.02.19 02.37		1
Total TPH	PHC635	5280	15.0	mg/kg	06.02.19 02.37		1
Total GRO-DRO	PHC628	5250	15.0	mg/kg	06.02.19 02.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.02.19 02.37	
o-Terphenyl	84-15-1	112	%	70-135	06.02.19 02.37	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08F**
Lab Sample Id: 625766-007

Matrix: Soil
Date Collected: 05.21.19 12.30

Date Received: 05.29.19 12.15
Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.504	0.504	mg/kg	06.04.19 20.39	U	250
Toluene	108-88-3	0.638	0.504	mg/kg	06.04.19 20.39		250
Ethylbenzene	100-41-4	3.38	0.504	mg/kg	06.04.19 20.39		250
m,p-Xylenes	179601-23-1	10.7	1.01	mg/kg	06.04.19 20.39		250
o-Xylene	95-47-6	3.02	0.504	mg/kg	06.04.19 20.39		250
Total Xylenes	1330-20-7	13.7	0.504	mg/kg	06.04.19 20.39		250
Total BTEX		17.7	0.504	mg/kg	06.04.19 20.39		250
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98		%	70-130	06.04.19 20.39	
4-Bromofluorobenzene	460-00-4	116		%	70-130	06.04.19 20.39	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08G**
Lab Sample Id: 625766-008

Matrix: Soil
Date Collected: 05.21.19 12.40

Date Received: 05.29.19 12.15
Sample Depth: 35 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	05.30.19 16.06	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	18.0	14.9	mg/kg	06.02.19 02.57		1
Diesel Range Organics (DRO)	C10C28DRO	110	14.9	mg/kg	06.02.19 02.57		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 02.57	U	1
Total TPH	PHC635	128	14.9	mg/kg	06.02.19 02.57		1
Total GRO-DRO	PHC628	128	14.9	mg/kg	06.02.19 02.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.02.19 02.57	
o-Terphenyl	84-15-1	97	%	70-135	06.02.19 02.57	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08G**
Lab Sample Id: 625766-008

Matrix: Soil
Date Collected: 05.21.19 12.40

Date Received: 05.29.19 12.15
Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Date Prep: 06.04.19 13.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.04.19 17.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.04.19 17.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.04.19 17.50	U	1
m,p-Xylenes	179601-23-1	0.00579	0.00398	mg/kg	06.04.19 17.50		1
o-Xylene	95-47-6	0.00330	0.00199	mg/kg	06.04.19 17.50		1
Total Xylenes	1330-20-7	0.00909	0.00199	mg/kg	06.04.19 17.50		1
Total BTEX		0.00909	0.00199	mg/kg	06.04.19 17.50		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.04.19 17.50		
4-Bromofluorobenzene	460-00-4	125	%	70-130	06.04.19 17.50		



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08H**
Lab Sample Id: 625766-009

Matrix: Soil
Date Collected: 05.21.19 12.45

Date Received: 05.29.19 12.15
Sample Depth: 40 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	05.30.19 16.11	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	853	15.0	mg/kg	06.02.19 03.16		1
Diesel Range Organics (DRO)	C10C28DRO	1510	15.0	mg/kg	06.02.19 03.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	16.7	15.0	mg/kg	06.02.19 03.16		1
Total TPH	PHC635	2380	15.0	mg/kg	06.02.19 03.16		1
Total GRO-DRO	PHC628	2360	15.0	mg/kg	06.02.19 03.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	06.02.19 03.16	
o-Terphenyl	84-15-1	104	%	70-135	06.02.19 03.16	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08H**
Lab Sample Id: 625766-009

Matrix: Soil
Date Collected: 05.21.19 12.45

Date Received: 05.29.19 12.15
Sample Depth: 40 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.201	0.201	mg/kg	06.04.19 22.14	U	100
Toluene	108-88-3	0.297	0.201	mg/kg	06.04.19 22.14		100
Ethylbenzene	100-41-4	2.01	0.201	mg/kg	06.04.19 22.14		100
m,p-Xylenes	179601-23-1	6.16	0.402	mg/kg	06.04.19 22.14		100
o-Xylene	95-47-6	1.84	0.201	mg/kg	06.04.19 22.14		100
Total Xylenes	1330-20-7	8.00	0.201	mg/kg	06.04.19 22.14		100
Total BTEX		10.3	0.201	mg/kg	06.04.19 22.14		100
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	139	%	70-130	06.04.19 22.14	**	
1,4-Difluorobenzene	540-36-3	92	%	70-130	06.04.19 22.14		



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08I**
Lab Sample Id: 625766-010

Matrix: Soil
Date Collected: 05.21.19 12.55

Date Received: 05.29.19 12.15
Sample Depth: 45 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.2	4.98	mg/kg	05.30.19 16.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	565	15.0	mg/kg	06.02.19 03.36		1
Diesel Range Organics (DRO)	C10C28DRO	1390	15.0	mg/kg	06.02.19 03.36		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	15.7	15.0	mg/kg	06.02.19 03.36		1
Total TPH	PHC635	1970	15.0	mg/kg	06.02.19 03.36		1
Total GRO-DRO	PHC628	1960	15.0	mg/kg	06.02.19 03.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-135	06.02.19 03.36	
o-Terphenyl	84-15-1	102	%	70-135	06.02.19 03.36	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08I**
Lab Sample Id: 625766-010

Matrix: Soil
Date Collected: 05.21.19 12.55

Date Received: 05.29.19 12.15
Sample Depth: 45 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0539	0.0497	mg/kg	06.04.19 22.33		25
Toluene	108-88-3	<0.0497	0.0497	mg/kg	06.04.19 22.33	U	25
Ethylbenzene	100-41-4	0.569	0.0497	mg/kg	06.04.19 22.33		25
m,p-Xylenes	179601-23-1	1.43	0.0994	mg/kg	06.04.19 22.33		25
o-Xylene	95-47-6	0.498	0.0497	mg/kg	06.04.19 22.33		25
Total Xylenes	1330-20-7	1.93	0.0497	mg/kg	06.04.19 22.33		25
Total BTEX		2.55	0.0497	mg/kg	06.04.19 22.33		25
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	174	%	70-130	06.04.19 22.33	**	
1,4-Difluorobenzene	540-36-3	91	%	70-130	06.04.19 22.33		



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08J**
Lab Sample Id: 625766-011

Matrix: Soil
Date Collected: 05.21.19 13.10

Date Received: 05.29.19 12.15
Sample Depth: 50 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.4	5.05	mg/kg	05.30.19 16.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	437	15.0	mg/kg	06.02.19 03.56		1
Diesel Range Organics (DRO)	C10C28DRO	871	15.0	mg/kg	06.02.19 03.56		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 03.56	U	1
Total TPH	PHC635	1310	15.0	mg/kg	06.02.19 03.56		1
Total GRO-DRO	PHC628	1310	15.0	mg/kg	06.02.19 03.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.02.19 03.56	
o-Terphenyl	84-15-1	102	%	70-135	06.02.19 03.56	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08J**
Lab Sample Id: 625766-011

Matrix: Soil
Date Collected: 05.21.19 13.10

Date Received: 05.29.19 12.15
Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091082

Date Prep: 06.03.19 17.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	0.0884	0.0501	mg/kg	06.04.19 21.19		25
Toluene	108-88-3	0.113	0.0501	mg/kg	06.04.19 21.19		25
Ethylbenzene	100-41-4	0.163	0.0501	mg/kg	06.04.19 21.19		25
m,p-Xylenes	179601-23-1	2.62	0.100	mg/kg	06.04.19 21.19		25
o-Xylene	95-47-6	0.824	0.0501	mg/kg	06.04.19 21.19		25
Total Xylenes	1330-20-7	3.44	0.0501	mg/kg	06.04.19 21.19		25
Total BTEX		3.81	0.0501	mg/kg	06.04.19 21.19		25
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	154	%	70-130	06.04.19 21.19	**	
1,4-Difluorobenzene	540-36-3	94	%	70-130	06.04.19 21.19		



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08K**
Lab Sample Id: 625766-012

Matrix: Soil
Date Collected: 05.21.19 13.20

Date Received: 05.29.19 12.15
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.2	5.00	mg/kg	05.30.19 16.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	109	15.0	mg/kg	06.02.19 04.15		1
Diesel Range Organics (DRO)	C10C28DRO	407	15.0	mg/kg	06.02.19 04.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 04.15	U	1
Total TPH	PHC635	516	15.0	mg/kg	06.02.19 04.15		1
Total GRO-DRO	PHC628	516	15.0	mg/kg	06.02.19 04.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	06.02.19 04.15	
o-Terphenyl	84-15-1	96	%	70-135	06.02.19 04.15	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08K**
Lab Sample Id: 625766-012

Matrix: Soil
Date Collected: 05.21.19 13.20

Date Received: 05.29.19 12.15
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091082

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.04.19 21.57	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.04.19 21.57	U	1
Ethylbenzene	100-41-4	0.00931	0.00201	mg/kg	06.04.19 21.57		1
m,p-Xylenes	179601-23-1	0.126	0.00402	mg/kg	06.04.19 21.57		1
o-Xylene	95-47-6	0.0416	0.00201	mg/kg	06.04.19 21.57		1
Total Xylenes	1330-20-7	0.168	0.00201	mg/kg	06.04.19 21.57		1
Total BTEX		0.177	0.00201	mg/kg	06.04.19 21.57		1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		93	%	70-130	06.04.19 21.57	
4-Bromofluorobenzene	460-00-4		146	%	70-130	06.04.19 21.57	**



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08L**
Lab Sample Id: 625766-013

Matrix: Soil
Date Collected: 05.21.19 13.35

Date Received: 05.29.19 12.15
Sample Depth: 60 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	514	4.99	mg/kg	05.30.19 16.42		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	425	15.0	mg/kg	06.02.19 04.35		1
Diesel Range Organics (DRO)	C10C28DRO	460	15.0	mg/kg	06.02.19 04.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 04.35	U	1
Total TPH	PHC635	885	15.0	mg/kg	06.02.19 04.35		1
Total GRO-DRO	PHC628	885	15.0	mg/kg	06.02.19 04.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	06.02.19 04.35	
o-Terphenyl	84-15-1	98	%	70-135	06.02.19 04.35	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08L**
Lab Sample Id: 625766-013

Matrix: Soil
Date Collected: 05.21.19 13.35

Date Received: 05.29.19 12.15
Sample Depth: 60 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091082

Date Prep: 06.03.19 17.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0504	0.0504	mg/kg	06.04.19 21.38	U	25
Toluene	108-88-3	<0.0504	0.0504	mg/kg	06.04.19 21.38	U	25
Ethylbenzene	100-41-4	0.338	0.0504	mg/kg	06.04.19 21.38		25
m,p-Xylenes	179601-23-1	<0.101	0.101	mg/kg	06.04.19 21.38	U	25
o-Xylene	95-47-6	0.0554	0.0504	mg/kg	06.04.19 21.38		25
Total Xylenes	1330-20-7	0.0554	0.0504	mg/kg	06.04.19 21.38		25
Total BTEX		0.393	0.0504	mg/kg	06.04.19 21.38		25
% Recovery							
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		108	%	70-130	06.04.19 21.38	
1,4-Difluorobenzene	540-36-3		97	%	70-130	06.04.19 21.38	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08M**
Lab Sample Id: 625766-014

Matrix: Soil
Date Collected: 05.21.19 14.00

Date Received: 05.29.19 12.15
Sample Depth: 65 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.5	4.96	mg/kg	05.30.19 16.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 04.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 04.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 04.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 04.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 04.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.02.19 04.55	
o-Terphenyl	84-15-1	91	%	70-135	06.02.19 04.55	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08M**
Lab Sample Id: 625766-014

Matrix: Soil
Date Collected: 05.21.19 14.00

Date Received: 05.29.19 12.15
Sample Depth: 65 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091082

Prep Method: SW5030B

% Moisture:

Date Prep: 06.03.19 17.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.04.19 19.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.04.19 19.03	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		103	%	70-130	06.04.19 19.03	
1,4-Difluorobenzene	540-36-3		95	%	70-130	06.04.19 19.03	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08N**
Lab Sample Id: 625766-015

Matrix: Soil
Date Collected: 05.21.19 14.20

Date Received: 05.29.19 12.15
Sample Depth: 70 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090707

Date Prep: 05.30.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.2	5.02	mg/kg	05.30.19 16.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3090920

Date Prep: 06.01.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 05.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 05.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 05.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 05.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 05.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.02.19 05.15	
o-Terphenyl	84-15-1	92	%	70-135	06.02.19 05.15	



Certificate of Analytical Results 625766



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **BH08N**
Lab Sample Id: 625766-015

Matrix: Soil
Date Collected: 05.21.19 14.20

Date Received: 05.29.19 12.15
Sample Depth: 70 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091082

Prep Method: SW5030B

% Moisture:

Date Prep: 06.03.19 17.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.04.19 19.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.04.19 19.22	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		96	%	70-130	06.04.19 19.22	
1,4-Difluorobenzene	540-36-3		97	%	70-130	06.04.19 19.22	

- 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 625766

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

MB Sample Id: 7678864-1-BLK

Matrix: Solid

LCS Sample Id: 7678864-1-BKS

Prep Method: E300P

Date Prep: 05.30.19

LCSD Sample Id: 7678864-1-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	262	105	261	104	90-110	0	20	mg/kg	05.30.19 14:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

Parent Sample Id: 625765-007

Matrix: Soil

MS Sample Id: 625765-007 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625765-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	38.4	250	316	111	324	114	90-110	3	20	mg/kg	05.30.19 14:43	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090707

Parent Sample Id: 625766-006

Matrix: Soil

MS Sample Id: 625766-006 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625766-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	154	250	435	112	436	113	90-110	0	20	mg/kg	05.30.19 15:50	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090920

MB Sample Id: 7679065-1-BLK

Matrix: Solid

LCS Sample Id: 7679065-1-BKS

Prep Method: TX1005P

Date Prep: 06.01.19

LCSD Sample Id: 7679065-1-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	1190	119	1200	120	70-135	1	20	mg/kg	06.01.19 21:25	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	1150	115	70-135	3	20	mg/kg	06.01.19 21:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		126		127		70-135	%	06.01.19 21:25
o-Terphenyl	99		114		125		70-135	%	06.01.19 21:25

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

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

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 625766

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3090920

Parent Sample Id: 625944-001

Matrix: Water

MS Sample Id: 625944-001 S

Prep Method: TX1005P

Date Prep: 06.01.19

MSD Sample Id: 625944-001 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)	9.13	999	1050	104	1040	103	70-135	1	20	mg/kg	06.01.19 22:23	
Diesel Range Organics (DRO)	13.9	999	1010	100	1010	100	70-135	0	20	mg/kg	06.01.19 22:23	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		119		70-135	%	06.01.19 22:23
o-Terphenyl	94		103		70-135	%	06.01.19 22:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091082

MB Sample Id: 7679182-1-BLK

Matrix: Solid

LCS Sample Id: 7679182-1-BKS

Prep Method: SW5030B

Date Prep: 06.03.19

LCSD Sample Id: 7679182-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.0936	94	0.0977	97	70-130	4	35	mg/kg	06.04.19 12:29	
Toluene	<0.000452	0.0992	0.0886	89	0.0926	92	70-130	4	35	mg/kg	06.04.19 12:29	
Ethylbenzene	<0.000560	0.0992	0.0952	96	0.0984	97	70-130	3	35	mg/kg	06.04.19 12:29	
m,p-Xylenes	<0.00101	0.198	0.193	97	0.200	99	70-130	4	35	mg/kg	06.04.19 12:29	
o-Xylene	<0.000342	0.0992	0.0956	96	0.102	101	70-130	6	35	mg/kg	06.04.19 12:29	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		99		102		70-130	%	06.04.19 12:29
4-Bromofluorobenzene	84		96		104		70-130	%	06.04.19 12:29

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

MB Sample Id: 7679256-1-BLK

Matrix: Solid

LCS Sample Id: 7679256-1-BKS

Prep Method: SW5030B

Date Prep: 06.04.19

LCSD Sample Id: 7679256-1-BSL

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.112	112	0.108	109	70-130	4	35	mg/kg	06.04.19 14:00	
Toluene	<0.00199	0.0996	0.101	101	0.0973	98	70-130	4	35	mg/kg	06.04.19 14:00	
Ethylbenzene	<0.00199	0.0996	0.106	106	0.102	103	70-130	4	35	mg/kg	06.04.19 14:00	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.201	101	70-130	3	35	mg/kg	06.04.19 14:00	
o-Xylene	<0.00199	0.0996	0.102	102	0.0985	99	70-130	3	35	mg/kg	06.04.19 14:00	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		103		102		70-130	%	06.04.19 14:00
4-Bromofluorobenzene	98		94		95		70-130	%	06.04.19 14:00

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

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

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 625766

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091082

Parent Sample Id: 626272-009

Matrix: Soil

MS Sample Id: 626272-009 S

Prep Method: SW5030B

Date Prep: 06.03.19

MSD Sample Id: 626272-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0892	90	0.0913	91	70-130	2	35	mg/kg	06.04.19 13:11	
Toluene	0.000686	0.0996	0.0824	82	0.0836	83	70-130	1	35	mg/kg	06.04.19 13:11	
Ethylbenzene	<0.000563	0.0996	0.0841	84	0.0842	84	70-130	0	35	mg/kg	06.04.19 13:11	
m,p-Xylenes	<0.00101	0.199	0.175	88	0.177	89	70-130	1	35	mg/kg	06.04.19 13:11	
o-Xylene	0.000373	0.0996	0.0891	89	0.0901	90	70-130	1	35	mg/kg	06.04.19 13:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	06.04.19 13:11
4-Bromofluorobenzene	106		108		70-130	%	06.04.19 13:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

Parent Sample Id: 625896-001

Matrix: Soil

MS Sample Id: 625896-001 S

Prep Method: SW5030B

Date Prep: 06.04.19

MSD Sample Id: 625896-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0857	86	0.0757	76	70-130	12	35	mg/kg	06.04.19 14:38	
Toluene	<0.00200	0.0998	0.0778	78	0.0699	70	70-130	11	35	mg/kg	06.04.19 14:38	
Ethylbenzene	<0.00200	0.0998	0.0812	81	0.0712	72	70-130	13	35	mg/kg	06.04.19 14:38	
m,p-Xylenes	<0.00399	0.200	0.161	81	0.142	72	70-130	13	35	mg/kg	06.04.19 14:38	
o-Xylene	<0.00200	0.0998	0.0789	79	0.0695	70	70-130	13	35	mg/kg	06.04.19 14:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	06.04.19 14:38
4-Bromofluorobenzene	97		99		70-130	%	06.04.19 14:38

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

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

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

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

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 (813-630-3000)

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Page 1 of 2

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

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

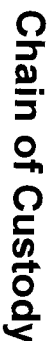
ANALYSIS REQUEST										Work Order Notes	
Project Name:		JRU 10					Turn Around				
Project Number:		2RP-3179, 2RP-3464, 2RP-5243					Routine		☒		
P.O. Number:							Rush:				
Sampler's Name:		Benjamin Beill					Due Date:				
SAMPLE RECEIPT		Temp Blank:		Yes ☒ No ☐		Wet Ice:		Yes ☒ No ☐			
Temperature (°C):		0.0/0.9				Thermometer ID:		V2			
Received Intact:		Yes ☒ No ☐									
Cooler Custody Seals:		Yes ☒ No ☐ N/A				Correction Factor:		-0.1			
Sample Custody Seals:		Yes ☒ No ☐ N/A				Total Containers:					
Number of Containers (PA 8015) (PA 0=8021) (EPA 300.0)											
TAT starts the day received by the lab, if received by 4:30pm											

[illegible]

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		5/24/2016 40	2		5/29/19
3			4		12/5
5			6		



Work Order No:

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) 565-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-555-392-7550) Hobbs, NM (575-392-7550)

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Page 1 of 1

Work Order Comments	
Program: UST/PST ☐ RP ☐ brownfields ☐ RC ☐ hyperfund ☐ State of Project: Reporting: level II ☐ level III ☐ ST/UST ☐ RRP ☐ level IV ☐ Deliverables: EDD ☐ ADaPT ☐ Other:	

Project Name:		JRU 10	Turn Around																																																																																																								
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[illegible]

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/24/19 01640			5/24/19



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625766

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)?	.4
#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: 05/29/2019

Checklist reviewed by:

Kalei Stout

Date: 05/29/2019

Analytical Report 625896

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU 10

2RP-3179, 2RP-3464, 2RP-5243

10-JUN-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)

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)



10-JUN-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **625896**

JRU 10

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) 625896. 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. 625896 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

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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

LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW01	S	05-22-19 15:55	1 ft	625896-001
MW01A	S	05-22-19 16:00	2 ft	625896-002
MW01B	S	05-22-19 16:05	3 ft	625896-003
MW01C	S	05-22-19 16:10	4 ft	625896-004
MW01D	S	05-22-19 16:15	5 ft	625896-005
MW01E	S	05-22-19 16:20	6 ft	625896-006
MW01F	S	05-22-19 16:25	7 ft	625896-007
MW01G	S	05-22-19 16:30	8 ft	625896-008
MW01H	S	05-22-19 16:35	9 ft	625896-009
MW01I	S	05-22-19 16:40	10 ft	625896-010
MW01J	S	05-22-19 16:45	11 ft	625896-011
MW01K	S	05-22-19 16:50	12 ft	625896-012
MW01L	S	05-22-19 16:53	13 ft	625896-013
MW01M	S	05-22-19 16:56	14 ft	625896-014
MW01N	S	05-22-19 17:00	15 ft	625896-015
MW01O	S	05-22-19 17:02	16 ft	625896-016
MW01P	S	05-22-19 17:05	17 ft	625896-017
MW01Q	S	05-22-19 17:08	18 ft	625896-018
MW01R	S	05-22-19 17:10	19 ft	625896-019
MW01S	S	05-22-19 17:12	20 ft	625896-020
MW01T	S	05-22-19 17:15	21 ft	625896-021
MW01U	S	05-22-19 17:20	22 ft	625896-022
MW01V	S	05-22-19 17:25	23 ft	625896-023
MW01W	S	05-22-19 17:28	24 ft	625896-024
MW01X	S	05-22-19 17:30	25 ft	625896-025
MW01Y	S	05-22-19 17:32	26 ft	625896-026
MW01Z	S	05-22-19 17:34	27 ft	625896-027
MW01AA	S	05-22-19 17:38	28 ft	625896-028
MW01AB	S	05-22-19 17:39	29 ft	625896-029
MW01AC	S	05-22-19 17:40	30 ft	625896-030
MW01AD	S	05-22-19 17:42	31 ft	625896-031
MW01AE	S	05-22-19 17:43	32 ft	625896-032
MW01AF	S	05-22-19 17:44	33 ft	625896-033
MW01AG	S	05-22-19 17:45	34 ft	625896-034
MW01AH	S	05-22-19 17:50	35 ft	625896-035
MW01AI	S	05-22-19 17:55	36 ft	625896-036
MW01AJ	S	05-22-19 18:00	37 ft	625896-037
MW01AK	S	05-22-19 18:05	38 ft	625896-038
MW01AL	S	05-22-19 18:10	39 ft	625896-039
MW01AM	S	05-22-19 18:12	40 ft	625896-040
MW01AN	S	05-22-19 18:15	41 ft	625896-041
MW01AO	S	05-23-19 06:45	42 ft	625896-042
MW01AP	S	05-23-19 06:50	43 ft	625896-043



Sample Cross Reference 625896



LT Environmental, Inc., Arvada, CO

JRU 10

MW01AQ	S	05-23-19 06:55	44 ft	625896-044
MW01AR	S	05-23-19 07:00	45 ft	625896-045
MW01AS	S	05-23-19 07:10	46 ft	625896-046
MW01AT	S	05-23-19 07:20	47 ft	625896-047
MW01AU	S	05-23-19 07:30	48 ft	625896-048
MW01AV	S	05-23-19 07:35	49 ft	625896-049
MW01AW	S	05-23-19 07:40	50 ft	625896-050
MW01AX	S	05-23-19 07:50	51 ft	625896-051
MW01AY	S	05-23-19 08:00	52 ft	625896-052
MW01AZ	S	05-23-19 08:10	53 ft	625896-053
MW01BA	S	05-23-19 08:15	54 ft	625896-054
MW01BB	S	05-23-19 08:20	55 ft	625896-055
MW01BC	S	05-23-19 08:22	56 ft	625896-056
MW01BD	S	05-23-19 08:25	57 ft	625896-057
MW01BE	S	05-23-19 08:30	58 ft	625896-058
MW01BF	S	05-23-19 08:32	59 ft	625896-059
MW01BG	S	05-23-19 08:35	60 ft	625896-060
MW01BH	S	05-23-19 08:40	61 ft	625896-061
MW01BI	S	05-23-19 08:45	62 ft	625896-062
MW01BJ	S	05-23-19 08:48	63 ft	625896-063
MW01BK	S	05-23-19 08:50	64 ft	625896-064
MW01BL	S	05-23-19 08:55	65 ft	625896-065
MW01BM	S	05-23-19 08:58	66 ft	625896-066
MW01BN	S	05-23-19 09:00	67 ft	625896-067
MW01BO	S	05-23-19 09:05	68 ft	625896-068
MW01BP	S	05-23-19 09:15	69 ft	625896-069
MW01BQ	S	05-23-19 09:20	70 ft	625896-070
MW01BR	S	05-23-19 09:25	71 ft	625896-071
MW01BS	S	05-23-19 09:30	72 ft	625896-072
MW01BT	S	05-23-19 09:35	73 ft	625896-073
MW01BU	S	05-23-19 09:40	74 ft	625896-074
MW01BV	S	05-23-19 09:45	75 ft	625896-075
MW01BW	S	05-23-19 09:50	76 ft	625896-076
MW01BX	S	05-23-19 09:55	77 ft	625896-077
MW01BY	S	05-23-19 10:00	78 ft	625896-078
MW01BZ	S	05-23-19 10:05	79 ft	625896-079
MW01CA	S	05-23-19 10:10	80 ft	625896-080
MW01CB	S	05-23-19 10:15	81 ft	625896-081
MW01CC	S	05-23-19 10:17	82 ft	625896-082
MW01CD	S	05-23-19 10:20	83 ft	625896-083
MW01CE	S	05-23-19 10:25	84 ft	625896-084
MW01CF	S	05-23-19 10:28	85 ft	625896-085
MW01CG	S	05-23-19 10:30	86 ft	625896-086
MW01CH	S	05-23-19 10:32	87 ft	625896-087



Sample Cross Reference 625896



LT Environmental, Inc., Arvada, CO

JRU 10

MW01CI	S	05-23-19 10:34	88 ft	625896-088
MW01CJ	S	05-23-19 10:36	89 ft	625896-089
MW01CK	S	05-23-19 10:38	90 ft	625896-090
MW01CL	S	05-23-19 10:40	91 ft	625896-091
MW01CM	S	05-23-19 10:42	92 ft	625896-092
MW01CN	S	05-23-19 10:46	93 ft	625896-093
MW01CO	S	05-23-19 10:48	94 ft	625896-094
MW01CP	S	05-23-19 10:50	95 ft	625896-095
MW01CQ	S	05-23-19 10:53	96 ft	625896-096
MW01CR	S	05-23-19 10:55	97 ft	625896-097
MW01CS	S	05-23-19 10:58	98 ft	625896-098
MW01CT	S	05-23-19 11:00	99 ft	625896-099
MW01CU	S	05-23-19 11:05	100 ft	625896-100
MW01CV	S	05-23-19 11:10	101 ft	625896-101
MW01CW	S	05-23-19 11:15	102 ft	625896-102
MW01CX	S	05-23-19 11:20	103 ft	625896-103
MW01CY	S	05-23-19 11:25	104 ft	625896-104
MW01CZ	S	05-23-19 11:30	105 ft	625896-105
MW01DA	S	05-23-19 11:40	106 ft	625896-106
MW01DB	S	05-23-19 11:45	107 ft	625896-107
MW01DC	S	05-23-19 11:50	108 ft	625896-108
MW01DD	S	05-23-19 11:55	109 ft	625896-109
MW01DE	S	05-23-19 12:00	110 ft	625896-110
MW01DF	S	05-23-19 12:05	111 ft	625896-111
MW01DG	S	05-23-19 12:10	112 ft	625896-112
MW01DH	S	05-23-19 12:15	113 ft	625896-113
MW01DI	S	05-23-19 12:20	114 ft	625896-114
MW01DJ	S	05-23-19 12:25	115 ft	625896-115
MW01DK	S	05-23-19 12:30	116 ft	625896-116
MW01DL	S	05-23-19 12:35	117 ft	625896-117



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 10

Project ID: 2RP-3179, 2RP-3464, 2RI
Work Order Number(s): 625896

Report Date: 10-JUN-19
Date Received: 05/30/2019

Sample receipt non conformances and comments:

NEW VERSION GENERATED, CORRECT IMPORTATION FRO CHLORIDE SAMPLE 078. JK
06/10/19

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090743 Chloride by EPA 300

Lab Sample ID 625896-027 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625896-017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036.

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

Batch: LBA-3090835 Chloride by EPA 300

Lab Sample ID 625896-047 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625896-037, -038, -039, -040, -041, -042, -043, -044, -045, -046, -047, -048, -049, -050, -051, -052, -053, -054, -055, -056.

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

Batch: LBA-3090836 Chloride by EPA 300

Lab Sample ID 625896-067 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625896-057, -058, -059, -060, -061, -062, -063, -064, -065, -066, -067, -068, -069, -070, -071, -072, -073, -074, -075, -076.

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



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: JRU 10

Project ID: 2RP-3179, 2RP-3464, 2RI
Work Order Number(s): 625896

Report Date: 10-JUN-19
Date Received: 05/30/2019

Batch: LBA-3090839 Chloride by EPA 300

Lab Sample ID 625896-087 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625896-077, -078, -079, -080, -081, -082, -083, -084, -085, -086, -087, -088, -089, -090, -091, -092, -093, -094, -095, -096.

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

Batch: LBA-3091245 BTEX by EPA 8021B

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

Batch: LBA-3091357 TPH by SW8015 Mod

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

Samples affected are: 625896-073, 625896-075, 625896-074.

Batch: LBA-3091369 BTEX by EPA 8021B

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

Batch: LBA-3091375 BTEX by EPA 8021B

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

Client was made aware that not all samples would run within hold time.

Batch: LBA-3091376 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 625896-039.

Client was made aware that not all samples would run within hold time.

Batch: LBA-3091466 BTEX by EPA 8021B

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



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3179, 2RP-3464, 2RI
Work Order Number(s): 625896

Report Date: 10-JUN-19
Date Received: 05/30/2019

Batch: LBA-3091480 BTEX by EPA 8021B

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

Batch: LBA-3091490 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 625896-089.

Batch: LBA-3091494 BTEX-MTBE by EPA 8021B

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

Surrogate a,a,a-Trifluorotoluene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 625896-106.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 626215-001 S, 626215-001 SD.

Batch: LBA-3091699 TPH by SW8015 Mod

Surrogate 1-Chlorooctane recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 625896-011.



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-001	625896-002	625896-003	625896-004	625896-005	625896-006
	Field Id:	MW01	MW01A	MW01B	MW01C	MW01D	MW01E
	Depth:	1- ft	2- ft	3- ft	4- ft	5- ft	6- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-22-19 15:55	May-22-19 16:00	May-22-19 16:05	May-22-19 16:10	May-22-19 16:15	May-22-19 16:20
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-04-19 13:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30
	Analyzed:	Jun-04-19 15:55	Jun-05-19 19:43	Jun-05-19 13:06	Jun-05-19 13:25	Jun-05-19 13:44	Jun-05-19 14:03
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Benzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00403 0.00403	<0.00400 0.00400	<0.00399 0.00399	<0.00397 0.00397	<0.00404 0.00404
o-Xylene		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300	Extracted:	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00
	Analyzed:	May-31-19 06:12	May-31-19 06:33	May-31-19 06:41	May-31-19 06:48	May-31-19 06:55	May-31-19 07:02
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Chloride		109 4.96	107 5.03	112 5.03	125 5.03	79.2 5.03	182 5.01
TPH by SW8015 Mod	Extracted:	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	Analyzed:	Jun-07-19 01:51	Jun-07-19 03:05	Jun-07-19 03:29	Jun-07-19 03:54	Jun-07-19 04:18	Jun-07-19 04:43
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-007	625896-008	625896-009	625896-010	625896-011	625896-012
	<i>Field Id:</i>	MW01F	MW01G	MW01H	MW01I	MW01J	MW01K
	<i>Depth:</i>	7- ft	8- ft	9- ft	10- ft	11- ft	12- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-22-19 16:25	May-22-19 16:30	May-22-19 16:35	May-22-19 16:40	May-22-19 16:45	May-22-19 16:50
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30
	<i>Analyzed:</i>	Jun-05-19 14:22	Jun-05-19 14:41	Jun-05-19 15:00	Jun-05-19 15:19	Jun-05-19 15:38	Jun-05-19 16:52
	<i>Units/RL:</i>	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	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00403 0.00403	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00
	<i>Analyzed:</i>	May-31-19 07:10	May-31-19 07:31	May-31-19 07:39	May-31-19 08:31	May-31-19 08:38	May-31-19 08:45
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		196 5.00	207 5.01	242 4.99	229 4.95	59.7 5.04	86.8 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-07-19 05:07	Jun-07-19 05:32	Jun-07-19 05:56	Jun-07-19 06:21	Jun-07-19 23:02	Jun-07-19 23:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-013	625896-014	625896-015	625896-016	625896-017	625896-018
	<i>Field Id:</i>	MW01L	MW01M	MW01N	MW01O	MW01P	MW01Q
	<i>Depth:</i>	13- ft	14- ft	15- ft	16- ft	17- ft	18- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-22-19 16:53	May-22-19 16:56	May-22-19 17:00	May-22-19 17:02	May-22-19 17:05	May-22-19 17:08
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30
	<i>Analyzed:</i>	Jun-05-19 17:11	Jun-05-19 17:30	Jun-05-19 17:49	Jun-05-19 18:08	Jun-05-19 18:27	Jun-05-19 18:46
	<i>Units/RL:</i>	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	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402	<0.00401 0.00401	<0.00397 0.00397	<0.00403 0.00403
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300	<i>Extracted:</i>	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-30-19 17:00	May-31-19 08:30	May-31-19 08:30
	<i>Analyzed:</i>	May-31-19 08:52	May-31-19 09:00	May-31-19 09:07	May-31-19 09:14	May-31-19 09:24	May-31-19 09:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		99.2 4.99	90.8 5.02	97.1 5.04	83.6 5.04	74.8 5.00	231 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-07-19 23:43	Jun-08-19 00:03	Jun-08-19 00:23	Jun-08-19 00:43	Jun-08-19 01:03	Jun-08-19 01:24
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-019	625896-020	625896-021	625896-022	625896-023	625896-024
	<i>Field Id:</i>	MW01R	MW01S	MW01T	MW01U	MW01V	MW01W
	<i>Depth:</i>	19- ft	20- ft	21- ft	22- ft	23- ft	24- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-22-19 17:10	May-22-19 17:12	May-22-19 17:15	May-22-19 17:20	May-22-19 17:25	May-22-19 17:28
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 08:30	Jun-05-19 12:00	Jun-05-19 12:00	Jun-05-19 12:00
	<i>Analyzed:</i>	Jun-05-19 19:05	Jun-05-19 19:24	Jun-05-19 12:47	Jun-05-19 22:19	Jun-05-19 22:38	Jun-05-19 22:57
	<i>Units/RL:</i>	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	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00400 0.00400	<0.00399 0.00399	<0.00402 0.00402	<0.00397 0.00397
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30
	<i>Analyzed:</i>	May-31-19 09:44	May-31-19 09:50	May-31-19 09:55	May-31-19 10:10	May-31-19 10:15	May-31-19 10:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		237 5.00	134 4.98	126 5.01	127 5.03	81.1 5.01	116 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-08-19 01:44	Jun-08-19 02:04	Jun-07-19 09:02	Jun-07-19 10:03	Jun-07-19 10:23	Jun-07-19 10:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-025		625896-026		625896-027		625896-028		625896-029		625896-030	
	Field Id:	MW01X		MW01Y		MW01Z		MW01AA		MW01AB		MW01AC	
	Depth:	25- ft		26- ft		27- ft		28- ft		29- ft		30- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19 17:30		May-22-19 17:32		May-22-19 17:34		May-22-19 17:38		May-22-19 17:39		May-22-19 17:40	
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 12:00		Jun-05-19 12:00		Jun-05-19 12:00		Jun-05-19 12:00		Jun-05-19 12:00		Jun-05-19 12:00	
	Analyzed:	Jun-05-19 23:16		Jun-05-19 23:35		Jun-05-19 23:54		Jun-06-19 00:13		Jun-06-19 00:32		Jun-06-19 00:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398	<0.00402	0.00402	<0.00402	0.00402
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00201	0.00201	<0.00201	0.00201
Chloride by EPA 300	Extracted:	May-31-19 08:30		May-31-19 08:30		May-31-19 08:30		May-31-19 08:30		May-31-19 08:30		May-31-19 08:30	
	Analyzed:	May-31-19 10:26		May-31-19 10:31		May-31-19 10:36		May-31-19 10:51		May-31-19 10:57		May-31-19 11:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		50.3	5.01	52.1	5.04	42.9	5.04	29.5	5.04	56.1	5.05	33.7	4.97
TPH by SW8015 Mod	Extracted:	Jun-04-19 17:00		Jun-04-19 17:00		Jun-04-19 17:00		Jun-04-19 17:00		Jun-04-19 17:00		Jun-04-19 17:00	
	Analyzed:	Jun-07-19 11:04		Jun-07-19 11:24		Jun-07-19 11:44		Jun-07-19 12:04		Jun-07-19 12:25		Jun-07-19 12:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-031	625896-032	625896-033	625896-034	625896-035	625896-036
	<i>Field Id:</i>	MW01AD	MW01AE	MW01AF	MW01AG	MW01AH	MW01AI
	<i>Depth:</i>	31- ft	32- ft	33- ft	34- ft	35- ft	36- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-22-19 17:42	May-22-19 17:43	May-22-19 17:44	May-22-19 17:45	May-22-19 17:50	May-22-19 17:55
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 12:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00
	<i>Analyzed:</i>	Jun-06-19 01:10	Jun-05-19 22:50	Jun-05-19 23:09	Jun-05-19 23:28	Jun-05-19 23:47	Jun-06-19 00:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30	May-31-19 08:30
	<i>Analyzed:</i>	May-31-19 11:36	May-31-19 11:41	May-31-19 11:46	May-31-19 11:52	May-31-19 11:57	May-31-19 12:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		35.3 5.03	32.9 5.03	<5.05 5.05	27.0 5.05	33.9 5.01	52.0 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-07-19 13:33	Jun-07-19 13:53	Jun-08-19 11:26	Jun-07-19 14:33	Jun-07-19 14:53	Jun-07-19 15:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-037	625896-038	625896-039	625896-040	625896-041	625896-042
	<i>Field Id:</i>	MW01AJ	MW01AK	MW01AL	MW01AM	MW01AN	MW01AO
	<i>Depth:</i>	37- ft	38- ft	39- ft	40- ft	41- ft	42- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-22-19 18:00	May-22-19 18:05	May-22-19 18:10	May-22-19 18:12	May-22-19 18:15	May-23-19 06:45
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 13:00	Jun-05-19 09:32
	<i>Analyzed:</i>	Jun-06-19 00:25	Jun-06-19 00:44	Jun-06-19 01:03	Jun-06-19 01:22	Jun-05-19 22:31	Jun-05-19 19:13
	<i>Units/RL:</i>	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	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00397 0.00397	<0.00401 0.00401	<0.0373 0.0373
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.0187 0.0187
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40
	<i>Analyzed:</i>	May-31-19 13:14	May-31-19 13:29	May-31-19 13:35	May-31-19 13:40	May-31-19 13:45	May-31-19 14:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		35.0 4.95	30.0 5.05	20.0 4.98	13.6 5.00	24.2 5.02	34.4 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-07-19 15:33	Jun-07-19 15:54	Jun-07-19 16:15	Jun-07-19 16:35	Jun-07-19 18:32	Jun-07-19 19:36
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-043	625896-044	625896-045	625896-046	625896-047	625896-048
	<i>Field Id:</i>	MW01AP	MW01AQ	MW01AR	MW01AS	MW01AT	MW01AU
	<i>Depth:</i>	43- ft	44- ft	45- ft	46- ft	47- ft	48- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-23-19 06:50	May-23-19 06:55	May-23-19 07:00	May-23-19 07:10	May-23-19 07:20	May-23-19 07:30
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32
	<i>Analyzed:</i>	Jun-05-19 19:37	Jun-05-19 20:01	Jun-05-19 20:25	Jun-05-19 20:49	Jun-05-19 21:13	Jun-05-19 21:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	<0.0204 0.0204	<0.0198 0.0198
Toluene		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	0.0285 0.0204	<0.0198 0.0198
Ethylbenzene		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	<0.0204 0.0204	<0.0198 0.0198
m,p-Xylenes		<0.0402 0.0402	<0.0418 0.0418	<0.0406 0.0406	<0.0414 0.0414	<0.0407 0.0407	<0.0395 0.0395
o-Xylene		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	<0.0204 0.0204	<0.0198 0.0198
Total Xylenes		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	<0.0204 0.0204	<0.0198 0.0198
Total BTEX		<0.0201 0.0201	<0.0209 0.0209	<0.0203 0.0203	<0.0207 0.0207	0.0285 0.0204	<0.0198 0.0198
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40
	<i>Analyzed:</i>	May-31-19 14:05	May-31-19 14:11	May-31-19 14:16	May-31-19 14:21	May-31-19 14:26	May-31-19 14:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		7.77 4.95	35.7 5.02	29.9 4.97	27.8 4.99	12.7 5.03	13.0 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00
	<i>Analyzed:</i>	Jun-07-19 19:57	Jun-07-19 20:18	Jun-07-19 20:38	Jun-07-19 20:59	Jun-07-19 21:20	Jun-07-19 21:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-049	625896-050	625896-051	625896-052	625896-053	625896-054
	Field Id:	MW01AV	MW01AW	MW01AX	MW01AY	MW01AZ	MW01BA
	Depth:	49- ft	50- ft	51- ft	52- ft	53- ft	54- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 07:35	May-23-19 07:40	May-23-19 07:50	May-23-19 08:00	May-23-19 08:10	May-23-19 08:15
BTX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32
	Analyzed:	Jun-05-19 22:01	Jun-05-19 22:26	Jun-06-19 00:02	Jun-06-19 00:26	Jun-06-19 00:50	Jun-06-19 01:14
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
	Toluene	<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
Ethylbenzene		<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
m,p-Xylenes		<0.0402 0.0402	<0.0413 0.0413	<0.0405 0.0405	<0.0417 0.0417	<0.0409 0.0409	<0.0418 0.0418
o-Xylene		<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
Total Xylenes		<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
Total BTX		<0.0201 0.0201	<0.0207 0.0207	<0.0202 0.0202	<0.0208 0.0208	<0.0204 0.0204	<0.0209 0.0209
Chloride by EPA 300	Extracted:	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40	May-31-19 11:40
	Analyzed:	May-31-19 14:47	May-31-19 15:02	May-31-19 15:07	May-31-19 15:12	May-31-19 15:18	May-31-19 15:23
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	19.7 4.97	21.5 5.01	12.8 4.99	1.37 0.463	14.5 5.01	8.89 5.00
TPH by SW8015 Mod	Extracted:	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00
	Analyzed:	Jun-07-19 22:01	Jun-07-19 22:21	Jun-07-19 07:10	Jun-06-19 19:20	Jun-06-19 20:09	Jun-06-19 20:34
	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	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-055	625896-056	625896-057	625896-058	625896-059	625896-060
	Field Id:	MW01BB	MW01BC	MW01BD	MW01BE	MW01BF	MW01BG
	Depth:	55- ft	56- ft	57- ft	58- ft	59- ft	60- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 08:20	May-23-19 08:22	May-23-19 08:25	May-23-19 08:30	May-23-19 08:32	May-23-19 08:35
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32	Jun-05-19 09:32
	Analyzed:	Jun-06-19 01:38	Jun-06-19 02:03	Jun-06-19 02:27	Jun-06-19 02:51	Jun-06-19 03:15	Jun-06-19 03:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
	Toluene	<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
Ethylbenzene		<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
m,p-Xylenes		<0.0404 0.0404	<0.0405 0.0405	<0.0402 0.0402	<0.0380 0.0380	<0.0392 0.0392	<0.0408 0.0408
o-Xylene		<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
Total Xylenes		<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
Total BTEX		<0.0202 0.0202	<0.0202 0.0202	<0.0201 0.0201	<0.0190 0.0190	<0.0196 0.0196	<0.0204 0.0204
Chloride by EPA 300	Extracted:	May-31-19 11:40	May-31-19 11:40	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00
	Analyzed:	May-31-19 15:28	May-31-19 15:33	May-31-19 16:04	May-31-19 16:19	May-31-19 16:24	May-31-19 16:30
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	9.37 5.00	25.1 5.00	26.9 4.98	13.6 5.04	7.10 4.99	19.0 4.95
TPH by SW8015 Mod	Extracted:	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00
	Analyzed:	Jun-06-19 20:59	Jun-06-19 21:23	Jun-06-19 21:48	Jun-06-19 22:12	Jun-06-19 22:37	Jun-06-19 23:01
	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	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-061	625896-062	625896-063	625896-064	625896-065	625896-066
	<i>Field Id:</i>	MW01BH	MW01BI	MW01BJ	MW01BK	MW01BL	MW01BM
	<i>Depth:</i>	61- ft	62- ft	63- ft	64- ft	65- ft	66- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-23-19 08:40	May-23-19 08:45	May-23-19 08:48	May-23-19 08:50	May-23-19 08:55	May-23-19 08:58
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 09:32	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	<i>Analyzed:</i>	Jun-05-19 17:37	Jun-06-19 08:52	Jun-06-19 09:16	Jun-06-19 09:40	Jun-06-19 10:04	Jun-06-19 10:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
Toluene		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
Ethylbenzene		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
m,p-Xylenes		<0.0399 0.0399	<0.0409 0.0409	<0.0411 0.0411	<0.0409 0.0409	<0.0416 0.0416	<0.0404 0.0404
o-Xylene		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
Total Xylenes		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
Total BTEX		<0.0200 0.0200	<0.0204 0.0204	<0.0205 0.0205	<0.0204 0.0204	<0.0208 0.0208	<0.0202 0.0202
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00
	<i>Analyzed:</i>	May-31-19 16:35	May-31-19 16:50	May-31-19 16:55	May-31-19 17:00	May-31-19 17:06	May-31-19 17:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		18.9 5.00	15.7 5.02	17.1 4.98	9.88 5.05	9.86 4.98	9.30 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00
	<i>Analyzed:</i>	Jun-05-19 11:56	Jun-05-19 12:56	Jun-05-19 13:16	Jun-05-19 13:37	Jun-05-19 13:57	Jun-05-19 14:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-067		625896-068		625896-069		625896-070		625896-071		625896-072	
	Field Id:	MW01BN		MW01BO		MW01BP		MW01BQ		MW01BR		MW01BS	
	Depth:	67- ft		68- ft		69- ft		70- ft		71- ft		72- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-23-19 09:00		May-23-19 09:05		May-23-19 09:15		May-23-19 09:20		May-23-19 09:25		May-23-19 09:30	
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30		Jun-05-19 15:30		Jun-05-19 15:30		Jun-05-19 15:30		Jun-05-19 15:30		Jun-05-19 15:30	
	Analyzed:	Jun-06-19 10:52		Jun-06-19 11:17		Jun-06-19 11:41		Jun-06-19 12:06		Jun-06-19 13:42		Jun-06-19 14:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	<0.0202	0.0202	<0.0201	0.0201	<0.0201	0.0201
Toluene		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	0.0323	0.0202	0.0221	0.0201	<0.0201	0.0201
Ethylbenzene		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	<0.0202	0.0202	<0.0201	0.0201	<0.0201	0.0201
m,p-Xylenes		<0.0399	0.0399	<0.0417	0.0417	<0.0415	0.0415	<0.0403	0.0403	<0.0402	0.0402	<0.0402	0.0402
o-Xylene		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	<0.0202	0.0202	<0.0201	0.0201	<0.0201	0.0201
Total Xylenes		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	<0.0202	0.0202	<0.0201	0.0201	<0.0201	0.0201
Total BTEX		<0.0200	0.0200	<0.0208	0.0208	<0.0207	0.0207	0.0323	0.0202	0.0221	0.0201	<0.0201	0.0201
Chloride by EPA 300	Extracted:	May-31-19 12:00		May-31-19 12:00		May-31-19 12:00		May-31-19 12:00		May-31-19 12:00		May-31-19 12:00	
	Analyzed:	May-31-19 17:16		May-31-19 17:31		May-31-19 17:36		May-31-19 17:52		May-31-19 17:57		May-31-19 18:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12.9	5.02	15.3	4.96	8.35	4.98	9.89	4.95	6.34	5.03	8.31	4.99
TPH by SW8015 Mod	Extracted:	Jun-05-19 07:00		Jun-05-19 07:00		Jun-05-19 07:00		Jun-05-19 07:00		Jun-05-19 07:00		Jun-05-19 07:00	
	Analyzed:	Jun-05-19 14:37		Jun-05-19 14:56		Jun-05-19 15:16		Jun-05-19 15:36		Jun-06-19 05:48		Jun-06-19 06:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	53.2	14.9	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	53.2	14.9	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	53.2	14.9	<15.0	15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-073	625896-074	625896-075	625896-076	625896-077	625896-078
	<i>Field Id:</i>	MW01BT	MW01BU	MW01BV	MW01BW	MW01BX	MW01BY
	<i>Depth:</i>	73- ft	74- ft	75- ft	76- ft	77- ft	78- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-23-19 09:35	May-23-19 09:40	May-23-19 09:45	May-23-19 09:50	May-23-19 09:55	May-23-19 10:00
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	<i>Analyzed:</i>	Jun-06-19 14:31	Jun-06-19 14:55	Jun-06-19 15:20	Jun-06-19 16:37	Jun-06-19 17:01	Jun-06-19 17:26
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0200 0.0200	<0.0199 0.0199	<0.0201 0.0201	<0.0199 0.0199	<0.0204 0.0204	<0.0205 0.0205
Toluene		<0.0200 0.0200	<0.0199 0.0199	0.0542 0.0201	0.0319 0.0199	0.0611 0.0204	0.0594 0.0205
Ethylbenzene		<0.0200 0.0200	<0.0199 0.0199	<0.0201 0.0201	<0.0199 0.0199	<0.0204 0.0204	<0.0205 0.0205
m,p-Xylenes		<0.0401 0.0401	<0.0398 0.0398	<0.0402 0.0402	<0.0398 0.0398	<0.0407 0.0407	<0.0410 0.0410
o-Xylene		<0.0200 0.0200	<0.0199 0.0199	<0.0201 0.0201	<0.0199 0.0199	<0.0204 0.0204	<0.0205 0.0205
Total Xylenes		<0.0200 0.0200	<0.0199 0.0199	<0.0201 0.0201	<0.0199 0.0199	<0.0204 0.0204	<0.0205 0.0205
Total BTEX		<0.0200 0.0200	<0.0199 0.0199	0.0542 0.0201	0.0319 0.0199	0.0611 0.0204	0.0594 0.0205
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:00	May-31-19 12:15	May-31-19 12:15
	<i>Analyzed:</i>	May-31-19 18:07	May-31-19 18:12	May-31-19 18:18	May-31-19 18:23	May-31-19 18:54	May-31-19 19:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.18 4.96	6.18 4.95	8.85 5.04	7.08 4.99	9.48 5.00	131 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00	Jun-05-19 07:00
	<i>Analyzed:</i>	Jun-06-19 06:37	Jun-06-19 07:02	Jun-06-19 07:26	Jun-06-19 07:51	Jun-06-19 08:16	Jun-06-19 08:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-079	625896-080	625896-081	625896-082	625896-083	625896-084
	<i>Field Id:</i>	MW01BZ	MW01CA	MW01CB	MW01CC	MW01CD	MW01CE
	<i>Depth:</i>	79- ft	80- ft	81- ft	82- ft	83- ft	84- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-23-19 10:05	May-23-19 10:10	May-23-19 10:15	May-23-19 10:17	May-23-19 10:20	May-23-19 10:25
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	<i>Analyzed:</i>	Jun-06-19 17:50	Jun-06-19 18:14	Jun-06-19 07:17	Jun-05-19 22:46	Jun-05-19 23:13	Jun-05-19 23:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0201 0.0201	<0.0207 0.0207	<0.0206 0.0206	<0.0200 0.0200	<0.0202 0.0202	<0.0204 0.0204
Toluene		0.0443 0.0201	0.0415 0.0207	0.0432 0.0206	0.0220 0.0200	<0.0202 0.0202	0.0265 0.0204
Ethylbenzene		<0.0201 0.0201	<0.0207 0.0207	<0.0206 0.0206	<0.0200 0.0200	<0.0202 0.0202	<0.0204 0.0204
m,p-Xylenes		<0.0402 0.0402	<0.0415 0.0415	<0.0412 0.0412	<0.0401 0.0401	<0.0404 0.0404	<0.0408 0.0408
o-Xylene		<0.0201 0.0201	<0.0207 0.0207	<0.0206 0.0206	<0.0200 0.0200	<0.0202 0.0202	<0.0204 0.0204
Total Xylenes		<0.0201 0.0201	<0.0207 0.0207	<0.0206 0.0206	<0.0200 0.0200	<0.0202 0.0202	<0.0204 0.0204
Total BTEX		0.0443 0.0201	0.0415 0.0207	0.0432 0.0206	0.0220 0.0200	<0.0202 0.0202	0.0265 0.0204
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15
	<i>Analyzed:</i>	May-31-19 19:14	May-31-19 19:19	May-31-19 19:25	May-31-19 19:40	May-31-19 19:45	May-31-19 19:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		105 5.03	53.0 4.99	6.23 5.00	5.16 5.01	6.19 5.05	<5.00 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-05-19 10:00	Jun-05-19 10:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00
	<i>Analyzed:</i>	Jun-06-19 23:25	Jun-06-19 23:49	Jun-02-19 13:11	Jun-02-19 14:11	Jun-02-19 14:31	Jun-02-19 14:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-085	625896-086	625896-087	625896-088	625896-089	625896-090
	Field Id:	MW01CF	MW01CG	MW01CH	MW01CI	MW01CJ	MW01CK
	Depth:	85- ft	86- ft	87- ft	88- ft	89- ft	90- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 10:28	May-23-19 10:30	May-23-19 10:32	May-23-19 10:34	May-23-19 10:36	May-23-19 10:38
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	Analyzed:	Jun-06-19 00:07	Jun-06-19 00:34	Jun-06-19 01:02	Jun-06-19 01:29	Jun-06-19 01:56	Jun-06-19 02:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0202 0.0202	<0.0203 0.0203	<0.0198 0.0198	<0.0196 0.0196	<0.0197 0.0197	<0.0193 0.0193
Toluene		0.0444 0.0202	0.0385 0.0203	0.0297 0.0198	0.0333 0.0196	0.0295 0.0197	0.0270 0.0193
Ethylbenzene		<0.0202 0.0202	<0.0203 0.0203	<0.0198 0.0198	<0.0196 0.0196	<0.0197 0.0197	<0.0193 0.0193
m,p-Xylenes		<0.0403 0.0403	<0.0406 0.0406	<0.0396 0.0396	<0.0391 0.0391	<0.0394 0.0394	<0.0385 0.0385
o-Xylene		<0.0202 0.0202	<0.0203 0.0203	<0.0198 0.0198	<0.0196 0.0196	<0.0197 0.0197	<0.0193 0.0193
Total Xylenes		<0.0202 0.0202	<0.0203 0.0203	<0.0198 0.0198	<0.0196 0.0196	<0.0197 0.0197	<0.0193 0.0193
Total BTEX		0.0444 0.0202	0.0385 0.0203	0.0297 0.0198	0.0333 0.0196	0.0295 0.0197	0.0270 0.0193
Chloride by EPA 300	Extracted:	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15
	Analyzed:	May-31-19 19:55	May-31-19 20:01	May-31-19 20:06	May-31-19 20:21	May-31-19 20:26	May-31-19 20:42
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.00 5.00	<5.00 5.00	<5.00 5.00	6.30 4.96	<4.99 4.99	<4.96 4.96
TPH by SW8015 Mod	Extracted:	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00
	Analyzed:	Jun-02-19 15:10	Jun-02-19 15:29	Jun-02-19 15:49	Jun-02-19 16:08	Jun-02-19 16:28	Jun-02-19 16:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-091	625896-092	625896-093	625896-094	625896-095	625896-096
	Field Id:	MW01CL	MW01CM	MW01CN	MW01CO	MW01CP	MW01CQ
	Depth:	91- ft	92- ft	93- ft	94- ft	95- ft	96- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 10:40	May-23-19 10:42	May-23-19 10:46	May-23-19 10:48	May-23-19 10:50	May-23-19 10:53
BTEx by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	Analyzed:	Jun-06-19 04:10	Jun-06-19 04:37	Jun-06-19 05:04	Jun-06-19 05:31	Jun-06-19 05:58	Jun-06-19 06:25
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0205 0.0205	<0.0195 0.0195	<0.0202 0.0202	<0.0205 0.0205	<0.0200 0.0200	<0.0200 0.0200
Toluene		0.0266 0.0205	0.0331 0.0195	0.0364 0.0202	0.0328 0.0205	0.0279 0.0200	0.0381 0.0200
Ethylbenzene		<0.0205 0.0205	<0.0195 0.0195	<0.0202 0.0202	<0.0205 0.0205	<0.0200 0.0200	<0.0200 0.0200
m,p-Xylenes		<0.0410 0.0410	<0.0389 0.0389	<0.0404 0.0404	<0.0410 0.0410	<0.0399 0.0399	<0.0401 0.0401
o-Xylene		<0.0205 0.0205	<0.0195 0.0195	<0.0202 0.0202	<0.0205 0.0205	<0.0200 0.0200	<0.0200 0.0200
Total Xylenes		<0.0205 0.0205	<0.0195 0.0195	<0.0202 0.0202	<0.0205 0.0205	<0.0200 0.0200	<0.0200 0.0200
Total BTEX		0.0266 0.0205	0.0331 0.0195	0.0364 0.0202	0.0328 0.0205	0.0279 0.0200	0.0381 0.0200
Chloride by EPA 300	Extracted:	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15	May-31-19 12:15
	Analyzed:	May-31-19 20:47	May-31-19 20:52	May-31-19 20:57	May-31-19 21:02	May-31-19 21:07	May-31-19 21:13
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.44 5.00	<5.00 5.00	<4.95 4.95	<4.95 4.95	<4.95 4.95	<5.04 5.04
TPH by SW8015 Mod	Extracted:	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00
	Analyzed:	Jun-02-19 17:27	Jun-02-19 17:47	Jun-02-19 18:06	Jun-02-19 18:26	Jun-02-19 18:45	Jun-02-19 19:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-097	625896-098	625896-099	625896-100	625896-101	625896-102
	Field Id:	MW01CR	MW01CS	MW01CT	MW01CU	MW01CV	MW01CW
	Depth:	97- ft	98- ft	99- ft	100- ft	101- ft	102- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 10:55	May-23-19 10:58	May-23-19 11:00	May-23-19 11:05	May-23-19 11:10	May-23-19 11:15
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	Analyzed:	Jun-06-19 06:52	Jun-06-19 07:18	Jun-06-19 07:45	Jun-05-19 20:58	Jun-06-19 08:12	Jun-06-19 14:02
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0210 0.0210	<0.0197 0.0197	<0.0199 0.0199	<0.0199 0.0199	<0.0207 0.0207	<0.0204 0.0204
	Toluene	0.0252 0.0210	0.0354 0.0197	0.0358 0.0199	0.0278 0.0199	<0.0207 0.0207	<0.0204 0.0204
Ethylbenzene		<0.0210 0.0210	<0.0197 0.0197	<0.0199 0.0199	<0.0199 0.0199	<0.0207 0.0207	<0.0204 0.0204
m,p-Xylenes		<0.0420 0.0420	<0.0394 0.0394	<0.0398 0.0398	<0.0398 0.0398	<0.0413 0.0413	<0.0408 0.0408
o-Xylene		<0.0210 0.0210	<0.0197 0.0197	<0.0199 0.0199	<0.0199 0.0199	<0.0207 0.0207	<0.0204 0.0204
Total Xylenes		<0.0210 0.0210	<0.0197 0.0197	<0.0199 0.0199	<0.0199 0.0199	<0.0207 0.0207	<0.0204 0.0204
Total BTEX		0.0252 0.0210	0.0354 0.0197	0.0358 0.0199	0.0278 0.0199	<0.0207 0.0207	<0.0204 0.0204
Chloride by EPA 300	Extracted:	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00
	Analyzed:	May-31-19 20:34	May-31-19 20:56	May-31-19 21:03	May-31-19 21:10	May-31-19 21:18	May-31-19 21:39
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	9.86 5.02	8.96 4.95	11.3 5.01	<4.99 4.99	5.16 4.96	20.9 5.00
TPH by SW8015 Mod	Extracted:	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-02-19 09:00	Jun-05-19 10:00	Jun-05-19 10:00
	Analyzed:	Jun-02-19 19:24	Jun-02-19 19:43	Jun-02-19 20:02	Jun-02-19 20:22	Jun-06-19 14:45	Jun-06-19 15:59
	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	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	625896-103	625896-104	625896-105	625896-106	625896-107	625896-108
	<i>Field Id:</i>	MW01CX	MW01CY	MW01CZ	MW01DA	MW01DB	MW01DC
	<i>Depth:</i>	103- ft	104- ft	105- ft	106- ft	107- ft	108- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-23-19 11:20	May-23-19 11:25	May-23-19 11:30	May-23-19 11:40	May-23-19 11:45	May-23-19 11:50
BTEX by EPA 8021B SUB: T104704219-19-21	<i>Extracted:</i>	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	<i>Analyzed:</i>	Jun-06-19 14:29	Jun-06-19 14:56	Jun-06-19 15:24	Jun-06-19 16:40	Jun-06-19 17:07	Jun-06-19 17:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.0205 0.0205	<0.0197 0.0197	<0.0200 0.0200	<0.0201 0.0201	<0.0206 0.0206	<0.0207 0.0207
Toluene		0.0308 0.0205	0.0315 0.0197	0.0240 0.0200	0.0483 0.0201	0.0268 0.0206	0.0290 0.0207
Ethylbenzene		<0.0205 0.0205	<0.0197 0.0197	<0.0200 0.0200	<0.0201 0.0201	<0.0206 0.0206	<0.0207 0.0207
m,p-Xylenes		<0.0411 0.0411	<0.0394 0.0394	<0.0401 0.0401	<0.0402 0.0402	<0.0412 0.0412	<0.0415 0.0415
o-Xylene		<0.0205 0.0205	<0.0197 0.0197	<0.0200 0.0200	<0.0201 0.0201	<0.0206 0.0206	<0.0207 0.0207
Total Xylenes		<0.0205 0.0205	<0.0197 0.0197	<0.0200 0.0200	<0.0201 0.0201	<0.0206 0.0206	<0.0207 0.0207
Total BTEX		0.0308 0.0205	0.0315 0.0197	0.0240 0.0200	0.0483 0.0201	0.0268 0.0206	0.0290 0.0207
Chloride by EPA 300	<i>Extracted:</i>	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00
	<i>Analyzed:</i>	May-31-19 21:47	May-31-19 21:54	May-31-19 22:01	May-31-19 22:08	May-31-19 22:16	May-31-19 22:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.8 5.03	6.70 4.97	<5.05 5.05	5.50 4.99	6.74 5.00	17.8 5.04
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00	Jun-05-19 10:00
	<i>Analyzed:</i>	Jun-06-19 16:24	Jun-06-19 16:50	Jun-06-19 17:15	Jun-06-19 17:40	Jun-06-19 18:05	Jun-06-19 18:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	32.4 15.0	23.3 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	32.4 15.0	23.3 15.0	<15.0 15.0	<14.9 14.9
Total GRO-DRO		<15.0 15.0	<15.0 15.0	32.4 15.0	23.3 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-109	625896-110	625896-111	625896-112	625896-113	625896-114
	Field Id:	MW01DD	MW01DE	MW01DF	MW01DG	MW01DH	MW01DI
	Depth:	109- ft	110- ft	111- ft	112- ft	113- ft	114- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	May-23-19 11:55	May-23-19 12:00	May-23-19 12:05	May-23-19 12:10	May-23-19 12:15	May-23-19 12:20
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30
	Analyzed:	Jun-06-19 18:01	Jun-06-19 18:28	Jun-06-19 20:16	Jun-06-19 20:43	Jun-06-19 21:09	Jun-06-19 21:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.0204 0.0204	<0.0204 0.0204	<0.0199 0.0199	<0.0203 0.0203	<0.0204 0.0204	<0.0202 0.0202
	Toluene	0.0347 0.0204	0.0346 0.0204	0.0318 0.0199	0.0305 0.0203	<0.0204 0.0204	0.0323 0.0202
Ethylbenzene		<0.0204 0.0204	<0.0204 0.0204	<0.0199 0.0199	<0.0203 0.0203	<0.0204 0.0204	<0.0202 0.0202
m,p-Xylenes		<0.0408 0.0408	<0.0407 0.0407	<0.0398 0.0398	<0.0407 0.0407	<0.0408 0.0408	<0.0403 0.0403
o-Xylene		<0.0204 0.0204	<0.0204 0.0204	<0.0199 0.0199	<0.0203 0.0203	<0.0204 0.0204	<0.0202 0.0202
Total Xylenes		<0.0204 0.0204	<0.0204 0.0204	<0.0199 0.0199	<0.0203 0.0203	<0.0204 0.0204	<0.0202 0.0202
Total BTEX		0.0347 0.0204	0.0346 0.0204	0.0318 0.0199	0.0305 0.0203	<0.0204 0.0204	0.0323 0.0202
Chloride by EPA 300	Extracted:	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00	May-31-19 16:00
	Analyzed:	May-31-19 22:45	May-31-19 23:06	May-31-19 23:14	May-31-19 23:21	May-31-19 23:28	May-31-19 23:35
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	23.0 4.98	13.6 5.00	<5.00 5.00	60.6 5.00	<5.00 5.00	<5.03 5.03
TPH by SW8015 Mod	Extracted:	Jun-05-19 10:00	Jun-02-19 11:00	Jun-02-19 11:00	Jun-02-19 11:00	Jun-02-19 11:00	Jun-02-19 11:00
	Analyzed:	Jun-06-19 18:55	Jun-02-19 21:59	Jun-02-19 22:57	Jun-02-19 23:16	Jun-02-19 23:36	Jun-02-19 23:55
	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	<15.0 15.0	<14.9 14.9
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total GRO-DRO		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 625896

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179, 2RP-3464, 2RP-5243

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Thu May-30-19 10:58 am

Report Date: 10-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	625896-115	625896-116	625896-117			
	Field Id:	MW01DJ	MW01DK	MW01DL			
	Depth:	115- ft	116- ft	117- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	May-23-19 12:25	May-23-19 12:30	May-23-19 12:35			
BTEX by EPA 8021B SUB: T104704219-19-21	Extracted:	Jun-05-19 15:30	Jun-05-19 15:30	Jun-05-19 15:30			
	Analyzed:	Jun-06-19 22:03	Jun-06-19 22:30	Jun-06-19 22:57			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.0198 0.0198	<0.0204 0.0204	<0.0199 0.0199			
Toluene		0.0437 0.0198	0.0367 0.0204	0.0259 0.0199			
Ethylbenzene		<0.0198 0.0198	<0.0204 0.0204	<0.0199 0.0199			
m,p-Xylenes		<0.0397 0.0397	<0.0407 0.0407	<0.0398 0.0398			
o-Xylene		<0.0198 0.0198	<0.0204 0.0204	<0.0199 0.0199			
Total Xylenes		<0.0198 0.0198	<0.0204 0.0204	<0.0199 0.0199			
Total BTEX		0.0437 0.0198	0.0367 0.0204	0.0259 0.0199			
Chloride by EPA 300	Extracted:	May-31-19 16:00	May-31-19 16:00	May-31-19 16:30			
	Analyzed:	May-31-19 23:43	May-31-19 23:50	Jun-01-19 00:34			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		10.9 4.96	6.49 4.98	8.50 5.00			
TPH by SW8015 Mod	Extracted:	Jun-02-19 11:00	Jun-02-19 11:00	Jun-02-19 11:00			
	Analyzed:	Jun-03-19 00:15	Jun-03-19 00:34	Jun-03-19 00:54			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0			
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0			
Total TPH		<15.0 15.0	<14.9 14.9	<15.0 15.0			
Total GRO-DRO		<15.0 15.0	<14.9 14.9	<15.0 15.0			

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01**
Lab Sample Id: 625896-001

Matrix: Soil
Date Collected: 05.22.19 15.55

Date Received: 05.30.19 10.58
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	4.96	mg/kg	05.31.19 06.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 01.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 01.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 01.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 01.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 01.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.07.19 01.51	
o-Terphenyl	84-15-1	91	%	70-135	06.07.19 01.51	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01**
Lab Sample Id: 625896-001

Matrix: Soil
Date Collected: 05.22.19 15.55

Date Received: 05.30.19 10.58
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091245

Prep Method: SW5030B

% Moisture:

Date Prep: 06.04.19 13.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.04.19 15.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.04.19 15.55	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		102	%	70-130	06.04.19 15.55	
1,4-Difluorobenzene	540-36-3		109	%	70-130	06.04.19 15.55	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01A**
Lab Sample Id: 625896-002

Matrix: Soil
Date Collected: 05.22.19 16.00

Date Received: 05.30.19 10.58
Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	107	5.03	mg/kg	05.31.19 06.33		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 03.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 03.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 03.05	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 03.05	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 03.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.07.19 03.05	
o-Terphenyl	84-15-1	95	%	70-135	06.07.19 03.05	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01A**
Lab Sample Id: 625896-002

Matrix: Soil
Date Collected: 05.22.19 16.00

Date Received: 05.30.19 10.58
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.05.19 19.43	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.05.19 19.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.05.19 19.43		
4-Bromofluorobenzene	460-00-4	124	%	70-130	06.05.19 19.43		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01B**
Lab Sample Id: 625896-003

Matrix: Soil
Date Collected: 05.22.19 16.05

Date Received: 05.30.19 10.58
Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	112	5.03	mg/kg	05.31.19 06.41		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 03.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 03.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 03.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 03.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 03.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	132	%	70-135	06.07.19 03.29	
o-Terphenyl	84-15-1	116	%	70-135	06.07.19 03.29	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01B**
Lab Sample Id: 625896-003

Matrix: Soil
Date Collected: 05.22.19 16.05

Date Received: 05.30.19 10.58
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.05.19 13.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 13.06	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.05.19 13.06		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 13.06		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01C**
Lab Sample Id: 625896-004

Matrix: Soil
Date Collected: 05.22.19 16.10

Date Received: 05.30.19 10.58
Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	125	5.03	mg/kg	05.31.19 06.48		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 03.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 03.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 03.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 03.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 03.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.07.19 03.54	
o-Terphenyl	84-15-1	91	%	70-135	06.07.19 03.54	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01C**
Lab Sample Id: 625896-004

Matrix: Soil
Date Collected: 05.22.19 16.10

Date Received: 05.30.19 10.58
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.05.19 13.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 13.25	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 13.25		
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.05.19 13.25		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01D**
Lab Sample Id: 625896-005

Matrix: Soil
Date Collected: 05.22.19 16.15

Date Received: 05.30.19 10.58
Sample Depth: 5 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	79.2	5.03	mg/kg	05.31.19 06.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 04.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 04.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 04.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 04.18	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 04.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.07.19 04.18	
o-Terphenyl	84-15-1	90	%	70-135	06.07.19 04.18	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01D**
Lab Sample Id: 625896-005

Matrix: Soil
Date Collected: 05.22.19 16.15

Date Received: 05.30.19 10.58
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.05.19 13.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.05.19 13.44	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		106	%	70-130	06.05.19 13.44	
1,4-Difluorobenzene	540-36-3		109	%	70-130	06.05.19 13.44	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01E**
Lab Sample Id: 625896-006

Matrix: Soil
Date Collected: 05.22.19 16.20

Date Received: 05.30.19 10.58
Sample Depth: 6 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	182	5.01	mg/kg	05.31.19 07.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 04.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 04.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 04.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 04.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 04.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	06.07.19 04.43	
o-Terphenyl	84-15-1	92	%	70-135	06.07.19 04.43	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01E**
Lab Sample Id: 625896-006

Matrix: Soil
Date Collected: 05.22.19 16.20

Date Received: 05.30.19 10.58
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.05.19 14.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.05.19 14.03	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 14.03		
4-Bromofluorobenzene	460-00-4	108	%	70-130	06.05.19 14.03		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01F**
Lab Sample Id: 625896-007

Matrix: Soil
Date Collected: 05.22.19 16.25

Date Received: 05.30.19 10.58
Sample Depth: 7 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	196	5.00	mg/kg	05.31.19 07.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 05.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 05.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 05.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 05.07	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 05.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	06.07.19 05.07	
o-Terphenyl	84-15-1	108	%	70-135	06.07.19 05.07	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01F**
Lab Sample Id: 625896-007

Matrix: Soil
Date Collected: 05.22.19 16.25

Date Received: 05.30.19 10.58
Sample Depth: 7 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.05.19 14.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.05.19 14.22	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		107	%	70-130	06.05.19 14.22	
1,4-Difluorobenzene	540-36-3		109	%	70-130	06.05.19 14.22	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01G**
Lab Sample Id: 625896-008

Matrix: Soil
Date Collected: 05.22.19 16.30

Date Received: 05.30.19 10.58
Sample Depth: 8 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	207	5.01	mg/kg	05.31.19 07.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 05.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 05.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 05.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 05.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 05.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.07.19 05.32	
o-Terphenyl	84-15-1	109	%	70-135	06.07.19 05.32	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01G**
Lab Sample Id: 625896-008

Matrix: Soil
Date Collected: 05.22.19 16.30

Date Received: 05.30.19 10.58
Sample Depth: 8 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 14.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 14.41	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		106	%	70-130	06.05.19 14.41	
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.05.19 14.41	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01H**
Lab Sample Id: 625896-009

Matrix: Soil
Date Collected: 05.22.19 16.35

Date Received: 05.30.19 10.58
Sample Depth: 9 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	242	4.99	mg/kg	05.31.19 07.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 05.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 05.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 05.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 05.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 05.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	06.07.19 05.56	
o-Terphenyl	84-15-1	115	%	70-135	06.07.19 05.56	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01H**
Lab Sample Id: 625896-009

Matrix: Soil
Date Collected: 05.22.19 16.35

Date Received: 05.30.19 10.58
Sample Depth: 9 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.05.19 15.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.05.19 15.00	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		107	%	70-130	06.05.19 15.00	
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.05.19 15.00	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01I**
Lab Sample Id: 625896-010

Matrix: Soil
Date Collected: 05.22.19 16.40

Date Received: 05.30.19 10.58
Sample Depth: 10 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	229	4.95	mg/kg	05.31.19 08.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 06.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 06.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 06.21	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 06.21	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 06.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 06.21	
o-Terphenyl	84-15-1	106	%	70-135	06.07.19 06.21	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01I**
Lab Sample Id: 625896-010

Matrix: Soil
Date Collected: 05.22.19 16.40

Date Received: 05.30.19 10.58
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.05.19 15.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 15.19	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 15.19		
4-Bromofluorobenzene	460-00-4	106	%	70-130	06.05.19 15.19		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01J**
Lab Sample Id: 625896-011

Matrix: Soil
Date Collected: 05.22.19 16.45

Date Received: 05.30.19 10.58
Sample Depth: 11 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	59.7	5.04	mg/kg	05.31.19 08.38		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 23.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 23.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 23.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 23.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 23.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	06.07.19 23.02	**
o-Terphenyl	84-15-1	129	%	70-135	06.07.19 23.02	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01J**
Lab Sample Id: 625896-011

Matrix: Soil
Date Collected: 05.22.19 16.45

Date Received: 05.30.19 10.58
Sample Depth: 11 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.05.19 15.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.05.19 15.38	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		107	%	70-130	06.05.19 15.38	
4-Bromofluorobenzene	460-00-4		104	%	70-130	06.05.19 15.38	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01K**
Lab Sample Id: 625896-012

Matrix: Soil
Date Collected: 05.22.19 16.50

Date Received: 05.30.19 10.58
Sample Depth: 12 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	86.8	4.98	mg/kg	05.31.19 08.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 23.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 23.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 23.22	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 23.22	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 23.22	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	130	%	70-135	06.07.19 23.22	
84-15-1	129	%	70-135	06.07.19 23.22	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01K**
Lab Sample Id: 625896-012

Matrix: Soil
Date Collected: 05.22.19 16.50

Date Received: 05.30.19 10.58
Sample Depth: 12 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.05.19 16.52	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.05.19 16.52	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		100	%	70-130	06.05.19 16.52	
1,4-Difluorobenzene	540-36-3		105	%	70-130	06.05.19 16.52	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01L**
Lab Sample Id: 625896-013

Matrix: Soil
Date Collected: 05.22.19 16.53

Date Received: 05.30.19 10.58
Sample Depth: 13 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	99.2	4.99	mg/kg	05.31.19 08.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 23.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 23.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 23.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	06.07.19 23.43	
o-Terphenyl	84-15-1	115	%	70-135	06.07.19 23.43	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01L**
Lab Sample Id: 625896-013

Matrix: Soil
Date Collected: 05.22.19 16.53

Date Received: 05.30.19 10.58
Sample Depth: 13 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Date Prep: 06.05.19 08.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.05.19 17.11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.05.19 17.11	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		106	%	70-130	06.05.19 17.11	
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.05.19 17.11	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01M**
Lab Sample Id: 625896-014

Matrix: Soil
Date Collected: 05.22.19 16.56

Date Received: 05.30.19 10.58
Sample Depth: 14 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.8	5.02	mg/kg	05.31.19 09.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 00.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 00.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 00.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 00.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 00.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.08.19 00.03	
o-Terphenyl	84-15-1	112	%	70-135	06.08.19 00.03	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01M**
Lab Sample Id: 625896-014

Matrix: Soil
Date Collected: 05.22.19 16.56

Date Received: 05.30.19 10.58
Sample Depth: 14 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.05.19 17.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 17.30	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	06.05.19 17.30		
4-Bromofluorobenzene	460-00-4	107	%	70-130	06.05.19 17.30		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01N**
Lab Sample Id: 625896-015

Matrix: Soil
Date Collected: 05.22.19 17.00

Date Received: 05.30.19 10.58
Sample Depth: 15 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.1	5.04	mg/kg	05.31.19 09.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 00.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 00.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 00.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 00.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 00.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.08.19 00.23	
o-Terphenyl	84-15-1	119	%	70-135	06.08.19 00.23	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01N**
Lab Sample Id: 625896-015

Matrix: Soil
Date Collected: 05.22.19 17.00

Date Received: 05.30.19 10.58
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.05.19 17.49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.05.19 17.49	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		109	%	70-130	06.05.19 17.49	
4-Bromofluorobenzene	460-00-4		108	%	70-130	06.05.19 17.49	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW010**
Lab Sample Id: 625896-016

Matrix: Soil
Date Collected: 05.22.19 17.02

Date Received: 05.30.19 10.58
Sample Depth: 16 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090877

Date Prep: 05.30.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	83.6	5.04	mg/kg	05.31.19 09.14		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 00.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 00.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 00.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 00.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 00.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	06.08.19 00.43	
o-Terphenyl	84-15-1	121	%	70-135	06.08.19 00.43	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW010**
Lab Sample Id: 625896-016

Matrix: Soil
Date Collected: 05.22.19 17.02

Date Received: 05.30.19 10.58
Sample Depth: 16 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 18.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 18.08	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.05.19 18.08	
4-Bromofluorobenzene	460-00-4		109	%	70-130	06.05.19 18.08	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01P**
Lab Sample Id: 625896-017

Matrix: Soil
Date Collected: 05.22.19 17.05

Date Received: 05.30.19 10.58
Sample Depth: 17 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	74.8	5.00	mg/kg	05.31.19 09.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 01.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 01.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 01.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 01.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 01.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.08.19 01.03	
o-Terphenyl	84-15-1	97	%	70-135	06.08.19 01.03	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01P**
Lab Sample Id: 625896-017

Matrix: Soil
Date Collected: 05.22.19 17.05

Date Received: 05.30.19 10.58
Sample Depth: 17 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.05.19 18.27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.05.19 18.27	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121		%	70-130	06.05.19 18.27	
1,4-Difluorobenzene	540-36-3	105		%	70-130	06.05.19 18.27	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Q**
Lab Sample Id: 625896-018

Matrix: Soil
Date Collected: 05.22.19 17.08

Date Received: 05.30.19 10.58
Sample Depth: 18 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	231	4.96	mg/kg	05.31.19 09.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 01.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 01.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 01.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 01.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 01.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	06.08.19 01.24	
o-Terphenyl	84-15-1	123	%	70-135	06.08.19 01.24	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Q**
Lab Sample Id: 625896-018

Matrix: Soil
Date Collected: 05.22.19 17.08

Date Received: 05.30.19 10.58
Sample Depth: 18 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.05.19 18.46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.05.19 18.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	06.05.19 18.46		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 18.46		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01R**
Lab Sample Id: 625896-019

Matrix: Soil
Date Collected: 05.22.19 17.10

Date Received: 05.30.19 10.58
Sample Depth: 19 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	237	5.00	mg/kg	05.31.19 09.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 01.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 01.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 01.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 01.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 01.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	06.08.19 01.44	
o-Terphenyl	84-15-1	113	%	70-135	06.08.19 01.44	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01R**
Lab Sample Id: 625896-019

Matrix: Soil
Date Collected: 05.22.19 17.10

Date Received: 05.30.19 10.58
Sample Depth: 19 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.05.19 19.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.05.19 19.05	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		111	%	70-130	06.05.19 19.05	
1,4-Difluorobenzene	540-36-3		108	%	70-130	06.05.19 19.05	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01S**
Lab Sample Id: 625896-020

Matrix: Soil
Date Collected: 05.22.19 17.12

Date Received: 05.30.19 10.58
Sample Depth: 20 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	134	4.98	mg/kg	05.31.19 09.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 02.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 02.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 02.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 02.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 02.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.08.19 02.04	
o-Terphenyl	84-15-1	113	%	70-135	06.08.19 02.04	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01S**
Lab Sample Id: 625896-020

Matrix: Soil
Date Collected: 05.22.19 17.12

Date Received: 05.30.19 10.58
Sample Depth: 20 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 08.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 19.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 19.24	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.05.19 19.24		
1,4-Difluorobenzene	540-36-3	108	%	70-130	06.05.19 19.24		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01T**
Lab Sample Id: 625896-021

Matrix: Soil
Date Collected: 05.22.19 17.15

Date Received: 05.30.19 10.58
Sample Depth: 21 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	5.01	mg/kg	05.31.19 09.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 09.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 09.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 09.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 09.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 09.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.07.19 09.02	
o-Terphenyl	84-15-1	87	%	70-135	06.07.19 09.02	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01T**
Lab Sample Id: 625896-021

Matrix: Soil
Date Collected: 05.22.19 17.15

Date Received: 05.30.19 10.58
Sample Depth: 21 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091369

Date Prep: 06.05.19 08.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.05.19 12.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 12.47	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		102	%	70-130	06.05.19 12.47	
1,4-Difluorobenzene	540-36-3		107	%	70-130	06.05.19 12.47	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01U**
Lab Sample Id: 625896-022

Matrix: Soil
Date Collected: 05.22.19 17.20

Date Received: 05.30.19 10.58
Sample Depth: 22 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	127	5.03	mg/kg	05.31.19 10.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 10.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 10.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 10.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 10.03	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 10.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	06.07.19 10.03	
o-Terphenyl	84-15-1	117	%	70-135	06.07.19 10.03	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01U**
Lab Sample Id: 625896-022

Matrix: Soil
Date Collected: 05.22.19 17.20

Date Received: 05.30.19 10.58
Sample Depth: 22 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 12.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.05.19 22.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 22.19	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	06.05.19 22.19		
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.05.19 22.19		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01V**
Lab Sample Id: 625896-023

Matrix: Soil
Date Collected: 05.22.19 17.25

Date Received: 05.30.19 10.58
Sample Depth: 23 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.1	5.01	mg/kg	05.31.19 10.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 10.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 10.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 10.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 10.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 10.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	06.07.19 10.23	
o-Terphenyl	84-15-1	112	%	70-135	06.07.19 10.23	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01V**
Lab Sample Id: 625896-023

Matrix: Soil
Date Collected: 05.22.19 17.25

Date Received: 05.30.19 10.58
Sample Depth: 23 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 12.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.05.19 22.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.05.19 22.38	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.05.19 22.38		
4-Bromofluorobenzene	460-00-4	94	%	70-130	06.05.19 22.38		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01W**
Lab Sample Id: 625896-024

Matrix: Soil
Date Collected: 05.22.19 17.28

Date Received: 05.30.19 10.58
Sample Depth: 24 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	4.98	mg/kg	05.31.19 10.20		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 10.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 10.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 10.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 10.44	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 10.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 10.44	
o-Terphenyl	84-15-1	115	%	70-135	06.07.19 10.44	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01W**
Lab Sample Id: 625896-024

Matrix: Soil
Date Collected: 05.22.19 17.28

Date Received: 05.30.19 10.58
Sample Depth: 24 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 12.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.05.19 22.57	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.05.19 22.57	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		102	%	70-130	06.05.19 22.57	
1,4-Difluorobenzene	540-36-3		104	%	70-130	06.05.19 22.57	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01X**
Lab Sample Id: 625896-025

Matrix: Soil
Date Collected: 05.22.19 17.30

Date Received: 05.30.19 10.58
Sample Depth: 25 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.3	5.01	mg/kg	05.31.19 10.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 11.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 11.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 11.04	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 11.04	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 11.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	06.07.19 11.04	
o-Terphenyl	84-15-1	119	%	70-135	06.07.19 11.04	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01X**
Lab Sample Id: 625896-025

Matrix: Soil
Date Collected: 05.22.19 17.30

Date Received: 05.30.19 10.58
Sample Depth: 25 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Date Prep: 06.05.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.05.19 23.16	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.05.19 23.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.05.19 23.16		
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.05.19 23.16		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Y**
Lab Sample Id: 625896-026

Matrix: Soil
Date Collected: 05.22.19 17.32

Date Received: 05.30.19 10.58
Sample Depth: 26 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	52.1	5.04	mg/kg	05.31.19 10.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 11.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 11.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 11.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 11.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 11.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.07.19 11.24	
o-Terphenyl	84-15-1	112	%	70-135	06.07.19 11.24	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Y**
Lab Sample Id: 625896-026

Matrix: Soil
Date Collected: 05.22.19 17.32

Date Received: 05.30.19 10.58
Sample Depth: 26 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Date Prep: 06.05.19 12.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 23.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 23.35	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.05.19 23.35		
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.05.19 23.35		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Z**
Lab Sample Id: 625896-027

Matrix: Soil
Date Collected: 05.22.19 17.34

Date Received: 05.30.19 10.58
Sample Depth: 27 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.9	5.04	mg/kg	05.31.19 10.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 11.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 11.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 11.44	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 11.44	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	06.07.19 11.44	
o-Terphenyl	84-15-1	118	%	70-135	06.07.19 11.44	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01Z**
Lab Sample Id: 625896-027

Matrix: Soil
Date Collected: 05.22.19 17.34

Date Received: 05.30.19 10.58
Sample Depth: 27 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091375

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 12.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.05.19 23.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 23.54	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.05.19 23.54		
4-Bromofluorobenzene	460-00-4	103	%	70-130	06.05.19 23.54		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-028

Date Collected: 05.22.19 17.38

Sample Depth: 28 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.5	5.04	mg/kg	05.31.19 10.51		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 12.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 12.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 12.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 12.04	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 12.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	06.07.19 12.04	
o-Terphenyl	84-15-1	117	%	70-135	06.07.19 12.04	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-028

Date Collected: 05.22.19 17.38

Sample Depth: 28 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 12.00

Basis: Wet Weight

Seq Number: 3091375

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.06.19 00.13	UK	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
Total BTEX		<0.00199	0.00199	mg/kg	06.06.19 00.13	UK	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		85	%	70-130	06.06.19 00.13	
1,4-Difluorobenzene	540-36-3		102	%	70-130	06.06.19 00.13	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AB**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-029

Date Collected: 05.22.19 17.39

Sample Depth: 29 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.1	5.05	mg/kg	05.31.19 10.57		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 12.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 12.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 12.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 12.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 12.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	06.07.19 12.25	
o-Terphenyl	84-15-1	114	%	70-135	06.07.19 12.25	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AB**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-029

Date Collected: 05.22.19 17.39

Sample Depth: 29 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 12.00

Basis: Wet Weight

Seq Number: 3091375

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.06.19 00.32	UK	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
Total BTEX		<0.00201	0.00201	mg/kg	06.06.19 00.32	UK	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.06.19 00.32		
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.06.19 00.32		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AC**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-030

Date Collected: 05.22.19 17.40

Sample Depth: 30 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.7	4.97	mg/kg	05.31.19 11.31		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 12.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 12.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 12.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 12.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 12.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 12.54	
o-Terphenyl	84-15-1	113	%	70-135	06.07.19 12.54	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AC**

Matrix: Soil

Date Received: 05.30.19 10:58

Lab Sample Id: 625896-030

Date Collected: 05.22.19 17:40

Sample Depth: 30 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 12:00

Basis: Wet Weight

Seq Number: 3091375

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.06.19 00:51	UK	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
Total BTEX		<0.00201	0.00201	mg/kg	06.06.19 00:51	UK	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.06.19 00:51		
1,4-Difluorobenzene	540-36-3	98	%	70-130	06.06.19 00:51		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AD**
Lab Sample Id: 625896-031

Matrix: Soil
Date Collected: 05.22.19 17.42

Date Received: 05.30.19 10.58
Sample Depth: 31 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.3	5.03	mg/kg	05.31.19 11.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 13.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 13.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 13.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 13.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 13.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 13.33	
o-Terphenyl	84-15-1	114	%	70-135	06.07.19 13.33	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-031

Date Collected: 05.22.19 17.42

Sample Depth: 31 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 12.00

Basis: Wet Weight

Seq Number: 3091375

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.06.19 01.10	UK	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
Total BTEX		<0.00200	0.00200	mg/kg	06.06.19 01.10	UK	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		100	%	70-130	06.06.19 01.10	
4-Bromofluorobenzene	460-00-4		101	%	70-130	06.06.19 01.10	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-032

Date Collected: 05.22.19 17.43

Sample Depth: 32 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.9	5.03	mg/kg	05.31.19 11.41		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 13.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 13.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 13.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 13.53	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 13.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 13.53	
o-Terphenyl	84-15-1	114	%	70-135	06.07.19 13.53	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-032

Date Collected: 05.22.19 17.43

Sample Depth: 32 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13.00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 22.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 22.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	06.05.19 22.50		
4-Bromofluorobenzene	460-00-4	111	%	70-130	06.05.19 22.50		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AF**
Lab Sample Id: 625896-033

Matrix: Soil
Date Collected: 05.22.19 17.44

Date Received: 05.30.19 10.58
Sample Depth: 33 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	05.31.19 11.46	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.08.19 11.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.08.19 11.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.08.19 11.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.08.19 11.26	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.08.19 11.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	06.08.19 11.26	
o-Terphenyl	84-15-1	132	%	70-135	06.08.19 11.26	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AF**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-033

Date Collected: 05.22.19 17.44

Sample Depth: 33 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13.00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.05.19 23.09	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.05.19 23.09	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		113	%	70-130	06.05.19 23.09	
1,4-Difluorobenzene	540-36-3		94	%	70-130	06.05.19 23.09	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-034

Date Collected: 05.22.19 17.45

Sample Depth: 34 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27.0	5.05	mg/kg	05.31.19 11.52		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 14.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 14.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 14.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 14.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 14.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	06.07.19 14.33	
o-Terphenyl	84-15-1	118	%	70-135	06.07.19 14.33	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AG**

Matrix: Soil

Date Received: 05.30.19 10:58

Lab Sample Id: 625896-034

Date Collected: 05.22.19 17:45

Sample Depth: 34 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13:00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 23.28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 23.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.05.19 23.28		
4-Bromofluorobenzene	460-00-4	128	%	70-130	06.05.19 23.28		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-035

Date Collected: 05.22.19 17.50

Sample Depth: 35 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 08.30

Basis: Wet Weight

Seq Number: 3090743

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.9	5.01	mg/kg	05.31.19 11.57		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 14.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 14.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 14.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 14.53	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 14.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	06.07.19 14.53	
o-Terphenyl	84-15-1	105	%	70-135	06.07.19 14.53	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AH**

Matrix: Soil

Date Received: 05.30.19 10:58

Lab Sample Id: 625896-035

Date Collected: 05.22.19 17:50

Sample Depth: 35 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13:00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.05.19 23:47	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.05.19 23:47	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	06.05.19 23:47		
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.05.19 23:47		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AI**
Lab Sample Id: 625896-036

Matrix: Soil
Date Collected: 05.22.19 17.55

Date Received: 05.30.19 10.58
Sample Depth: 36 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090743

Date Prep: 05.31.19 08.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	52.0	4.95	mg/kg	05.31.19 12.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 15.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 15.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 15.13	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 15.13	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 15.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	06.07.19 15.13	
o-Terphenyl	84-15-1	110	%	70-135	06.07.19 15.13	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AI**
Lab Sample Id: 625896-036

Matrix: Soil
Date Collected: 05.22.19 17.55

Date Received: 05.30.19 10.58
Sample Depth: 36 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091376

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 13.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.06.19 00.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.06.19 00.06	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	06.06.19 00.06		
4-Bromofluorobenzene	460-00-4	114	%	70-130	06.06.19 00.06		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AJ**
Lab Sample Id: 625896-037

Matrix: Soil
Date Collected: 05.22.19 18.00

Date Received: 05.30.19 10.58
Sample Depth: 37 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.0	4.95	mg/kg	05.31.19 13.14		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 15.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 15.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 15.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 15.33	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 15.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	06.07.19 15.33	
o-Terphenyl	84-15-1	107	%	70-135	06.07.19 15.33	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AJ**
Lab Sample Id: 625896-037

Matrix: Soil
Date Collected: 05.22.19 18.00

Date Received: 05.30.19 10.58
Sample Depth: 37 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091376

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 13.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.06.19 00.25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.06.19 00.25	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		124	%	70-130	06.06.19 00.25	
1,4-Difluorobenzene	540-36-3		102	%	70-130	06.06.19 00.25	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AK**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-038

Date Collected: 05.22.19 18.05

Sample Depth: 38 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.0	5.05	mg/kg	05.31.19 13.29		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 15.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 15.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 15.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 15.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 15.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	06.07.19 15.54	
o-Terphenyl	84-15-1	111	%	70-135	06.07.19 15.54	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AK**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-038

Date Collected: 05.22.19 18.05

Sample Depth: 38 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13.00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.06.19 00.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.06.19 00.44	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		114	%	70-130	06.06.19 00.44	
1,4-Difluorobenzene	540-36-3		105	%	70-130	06.06.19 00.44	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AL**
Lab Sample Id: 625896-039

Matrix: Soil
Date Collected: 05.22.19 18.10

Date Received: 05.30.19 10.58
Sample Depth: 39 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.0	4.98	mg/kg	05.31.19 13.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091698

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 16.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 16.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 16.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 16.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 16.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.07.19 16.15	
o-Terphenyl	84-15-1	112	%	70-135	06.07.19 16.15	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AL**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-039

Date Collected: 05.22.19 18.10

Sample Depth: 39 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13.00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.06.19 01.03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.06.19 01.03	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	131	%	70-130	06.06.19 01.03	**	
1,4-Difluorobenzene	540-36-3	98	%	70-130	06.06.19 01.03		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-040

Date Collected: 05.22.19 18.12

Sample Depth: 40 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	5.00	mg/kg	05.31.19 13.40		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 16.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 16.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 16.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 16.35	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 16.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	06.07.19 16.35	
o-Terphenyl	84-15-1	110	%	70-135	06.07.19 16.35	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-040

Date Collected: 05.22.19 18.12

Sample Depth: 40 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: SCM

% Moisture:

Analyst: SCM

Date Prep: 06.05.19 13.00

Basis: Wet Weight

Seq Number: 3091376

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	06.06.19 01.22	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
Total BTEX		<0.00198	0.00198	mg/kg	06.06.19 01.22	U	1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3		104	%	70-130	06.06.19 01.22	
4-Bromofluorobenzene	460-00-4		113	%	70-130	06.06.19 01.22	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AN**
Lab Sample Id: 625896-041

Matrix: Soil
Date Collected: 05.22.19 18.15

Date Received: 05.30.19 10.58
Sample Depth: 41 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.2	5.02	mg/kg	05.31.19 13.45		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 18.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 18.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	06.07.19 18.32	
o-Terphenyl	84-15-1	115	%	70-135	06.07.19 18.32	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AN**
Lab Sample Id: 625896-041

Matrix: Soil
Date Collected: 05.22.19 18.15

Date Received: 05.30.19 10.58
Sample Depth: 41 ft

Analytical Method: BTEX by EPA 8021B

Tech: SCM

Analyst: SCM

Seq Number: 3091376

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 13.00

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.05.19 22.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.05.19 22.31	U	1
		% Recovery					
Surrogate	Cas Number		Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	06.05.19 22.31		
4-Bromofluorobenzene	460-00-4	109	%	70-130	06.05.19 22.31		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AO**
Lab Sample Id: 625896-042

Matrix: Soil
Date Collected: 05.23.19 06.45

Date Received: 05.30.19 10.58
Sample Depth: 42 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.4	4.99	mg/kg	05.31.19 14.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 19.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 19.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 19.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 19.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 19.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	06.07.19 19.36	
o-Terphenyl	84-15-1	114	%	70-135	06.07.19 19.36	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AO**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-042

Date Collected: 05.23.19 06.45

Sample Depth: 42 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
Toluene	108-88-3	<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
Ethylbenzene	100-41-4	<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
m,p-Xylenes	179601-23-1	<0.0373	0.0373	mg/kg	06.05.19 19.13	U	1
o-Xylene	95-47-6	<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
Total Xylenes	1330-20-7	<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
Total BTEX		<0.0187	0.0187	mg/kg	06.05.19 19.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	68-120	06.05.19 19.13		
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	06.05.19 19.13		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AP**
Lab Sample Id: 625896-043

Matrix: Soil
Date Collected: 05.23.19 06.50

Date Received: 05.30.19 10.58
Sample Depth: 43 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.77	4.95	mg/kg	05.31.19 14.05		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 19.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 19.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 19.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 19.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 19.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	06.07.19 19.57	
o-Terphenyl	84-15-1	127	%	70-135	06.07.19 19.57	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AP**
Lab Sample Id: 625896-043

Matrix: Soil
Date Collected: 05.23.19 06.50

Date Received: 05.30.19 10.58
Sample Depth: 43 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Date Prep: 06.05.19 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
Toluene	108-88-3	<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.05.19 19.37	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
Total BTEX		<0.0201	0.0201	mg/kg	06.05.19 19.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	68-120	06.05.19 19.37		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.05.19 19.37		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AQ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-044

Date Collected: 05.23.19 06.55

Sample Depth: 44 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.7	5.02	mg/kg	05.31.19 14.11		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 20.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 20.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 20.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 20.18	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 20.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	06.07.19 20.18	
o-Terphenyl	84-15-1	112	%	70-135	06.07.19 20.18	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AQ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-044

Date Collected: 05.23.19 06.55

Sample Depth: 44 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
Toluene	108-88-3	<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
Ethylbenzene	100-41-4	<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
m,p-Xylenes	179601-23-1	<0.0418	0.0418	mg/kg	06.05.19 20.01	U	1
o-Xylene	95-47-6	<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
Total Xylenes	1330-20-7	<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
Total BTEX		<0.0209	0.0209	mg/kg	06.05.19 20.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.05.19 20.01		
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	06.05.19 20.01		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AR**
Lab Sample Id: 625896-045

Matrix: Soil
Date Collected: 05.23.19 07.00

Date Received: 05.30.19 10.58
Sample Depth: 45 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	29.9	4.97	mg/kg	05.31.19 14.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 20.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 20.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 20.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 20.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 20.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	06.07.19 20.38	
o-Terphenyl	84-15-1	110	%	70-135	06.07.19 20.38	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AR**
Lab Sample Id: 625896-045

Matrix: Soil
Date Collected: 05.23.19 07.00

Date Received: 05.30.19 10.58
Sample Depth: 45 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Date Prep: 06.05.19 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
Toluene	108-88-3	<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
Ethylbenzene	100-41-4	<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
m,p-Xylenes	179601-23-1	<0.0406	0.0406	mg/kg	06.05.19 20.25	U	1
o-Xylene	95-47-6	<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
Total Xylenes	1330-20-7	<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
Total BTEX		<0.0203	0.0203	mg/kg	06.05.19 20.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.05.19 20.25		
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	06.05.19 20.25		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AS**
Lab Sample Id: 625896-046

Matrix: Soil
Date Collected: 05.23.19 07.10

Date Received: 05.30.19 10.58
Sample Depth: 46 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27.8	4.99	mg/kg	05.31.19 14.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 20.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 20.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 20.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 20.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 20.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.07.19 20.59	
o-Terphenyl	84-15-1	101	%	70-135	06.07.19 20.59	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AS**
Lab Sample Id: 625896-046

Matrix: Soil
Date Collected: 05.23.19 07.10

Date Received: 05.30.19 10.58
Sample Depth: 46 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Date Prep: 06.05.19 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
Toluene	108-88-3	<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
m,p-Xylenes	179601-23-1	<0.0414	0.0414	mg/kg	06.05.19 20.49	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
Total BTEX		<0.0207	0.0207	mg/kg	06.05.19 20.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	68-120	06.05.19 20.49		
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	06.05.19 20.49		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AT**
Lab Sample Id: 625896-047

Matrix: Soil
Date Collected: 05.23.19 07.20

Date Received: 05.30.19 10.58
Sample Depth: 47 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.7	5.03	mg/kg	05.31.19 14.26		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091699

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 21.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 21.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 21.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 21.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 21.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	06.07.19 21.20	
o-Terphenyl	84-15-1	107	%	70-135	06.07.19 21.20	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AT**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-047

Date Collected: 05.23.19 07.20

Sample Depth: 47 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.05.19 21.13	U	1
Toluene	108-88-3	0.0285	0.0204	mg/kg	06.05.19 21.13		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.05.19 21.13	U	1
m,p-Xylenes	179601-23-1	<0.0407	0.0407	mg/kg	06.05.19 21.13	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.05.19 21.13	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.05.19 21.13	U	1
Total BTEX		0.0285	0.0204	mg/kg	06.05.19 21.13		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	68-120	06.05.19 21.13		
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	06.05.19 21.13		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-048

Date Collected: 05.23.19 07.30

Sample Depth: 48 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.0	4.98	mg/kg	05.31.19 14.41		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 21.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 21.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 21.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 21.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 21.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.07.19 21.40	
o-Terphenyl	84-15-1	104	%	70-135	06.07.19 21.40	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-048

Date Collected: 05.23.19 07.30

Sample Depth: 48 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
Toluene	108-88-3	<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
Ethylbenzene	100-41-4	<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
m,p-Xylenes	179601-23-1	<0.0395	0.0395	mg/kg	06.05.19 21.37	U	1
o-Xylene	95-47-6	<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
Total Xylenes	1330-20-7	<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
Total BTEX		<0.0198	0.0198	mg/kg	06.05.19 21.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	68-120	06.05.19 21.37		
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	06.05.19 21.37		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-049

Date Collected: 05.23.19 07.35

Sample Depth: 49 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.7	4.97	mg/kg	05.31.19 14.47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 22.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 22.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 22.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 22.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 22.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.07.19 22.01	
o-Terphenyl	84-15-1	97	%	70-135	06.07.19 22.01	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-049

Date Collected: 05.23.19 07.35

Sample Depth: 49 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
Toluene	108-88-3	<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.05.19 22.01	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
Total BTEX		<0.0201	0.0201	mg/kg	06.05.19 22.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	68-120	06.05.19 22.01		
a,a,a-Trifluorotoluene	98-08-8	105	%	71-121	06.05.19 22.01		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-050

Date Collected: 05.23.19 07.40

Sample Depth: 50 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 11.40

Basis: Wet Weight

Seq Number: 3090835

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.5	5.01	mg/kg	05.31.19 15.02		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.07.19 22.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.07.19 22.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.07.19 22.21	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.07.19 22.21	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.07.19 22.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.07.19 22.21	
o-Terphenyl	84-15-1	102	%	70-135	06.07.19 22.21	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-050

Date Collected: 05.23.19 07.40

Sample Depth: 50 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
Toluene	108-88-3	<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
m,p-Xylenes	179601-23-1	<0.0413	0.0413	mg/kg	06.05.19 22.26	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
Total BTEX		<0.0207	0.0207	mg/kg	06.05.19 22.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.05.19 22.26		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.05.19 22.26		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AX**
Lab Sample Id: 625896-051

Matrix: Soil
Date Collected: 05.23.19 07.50

Date Received: 05.30.19 10.58
Sample Depth: 51 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	4.99	mg/kg	05.31.19 15.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091576

Date Prep: 06.04.19 17.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.07.19 07.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.07.19 07.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.07.19 07.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.07.19 07.10	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.07.19 07.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.07.19 07.10	
o-Terphenyl	84-15-1	95	%	70-135	06.07.19 07.10	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AX**
Lab Sample Id: 625896-051

Matrix: Soil
Date Collected: 05.23.19 07.50

Date Received: 05.30.19 10.58
Sample Depth: 51 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Date Prep: 06.05.19 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
Toluene	108-88-3	<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
m,p-Xylenes	179601-23-1	<0.0405	0.0405	mg/kg	06.06.19 00.02	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
Total BTEX		<0.0202	0.0202	mg/kg	06.06.19 00.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	68-120	06.06.19 00.02		
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	06.06.19 00.02		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AY**
Lab Sample Id: 625896-052

Matrix: Soil
Date Collected: 05.23.19 08.00

Date Received: 05.30.19 10.58
Sample Depth: 52 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1.37	0.463	mg/kg	05.31.19 15.12		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 19.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 19.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 19.20	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 19.20	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 19.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.06.19 19.20	
o-Terphenyl	84-15-1	83	%	70-135	06.06.19 19.20	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AY**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-052

Date Collected: 05.23.19 08.00

Sample Depth: 52 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
Toluene	108-88-3	<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
Ethylbenzene	100-41-4	<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
m,p-Xylenes	179601-23-1	<0.0417	0.0417	mg/kg	06.06.19 00.26	U	1
o-Xylene	95-47-6	<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
Total Xylenes	1330-20-7	<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
Total BTEX		<0.0208	0.0208	mg/kg	06.06.19 00.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	68-120	06.06.19 00.26		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.06.19 00.26		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AZ**
Lab Sample Id: 625896-053

Matrix: Soil
Date Collected: 05.23.19 08.10

Date Received: 05.30.19 10.58
Sample Depth: 53 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.5	5.01	mg/kg	05.31.19 15.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 20.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 20.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 20.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 20.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 20.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	06.06.19 20.09	
o-Terphenyl	84-15-1	100	%	70-135	06.06.19 20.09	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01AZ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-053

Date Collected: 05.23.19 08.10

Sample Depth: 53 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
m,p-Xylenes	179601-23-1	<0.0409	0.0409	mg/kg	06.06.19 00.50	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 00.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 00.50		
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	06.06.19 00.50		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BA**
Lab Sample Id: 625896-054

Matrix: Soil
Date Collected: 05.23.19 08.15

Date Received: 05.30.19 10.58
Sample Depth: 54 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.89	5.00	mg/kg	05.31.19 15.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 20.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 20.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 20.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 20.34	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 20.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.06.19 20.34	
o-Terphenyl	84-15-1	84	%	70-135	06.06.19 20.34	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-054

Date Collected: 05.23.19 08.15

Sample Depth: 54 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
Toluene	108-88-3	<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
Ethylbenzene	100-41-4	<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
m,p-Xylenes	179601-23-1	<0.0418	0.0418	mg/kg	06.06.19 01.14	U	1
o-Xylene	95-47-6	<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
Total Xylenes	1330-20-7	<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
Total BTEX		<0.0209	0.0209	mg/kg	06.06.19 01.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.06.19 01.14		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	06.06.19 01.14		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BB**
Lab Sample Id: 625896-055

Matrix: Soil
Date Collected: 05.23.19 08.20

Date Received: 05.30.19 10.58
Sample Depth: 55 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.37	5.00	mg/kg	05.31.19 15.28		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 20.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 20.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 20.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 20.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 20.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	06.06.19 20.59	
o-Terphenyl	84-15-1	97	%	70-135	06.06.19 20.59	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BB**
Lab Sample Id: 625896-055

Matrix: Soil
Date Collected: 05.23.19 08.20

Date Received: 05.30.19 10.58
Sample Depth: 55 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 09.32

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
Toluene	108-88-3	<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
m,p-Xylenes	179601-23-1	<0.0404	0.0404	mg/kg	06.06.19 01.38	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
Total BTEX		<0.0202	0.0202	mg/kg	06.06.19 01.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	68-120	06.06.19 01.38		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.06.19 01.38		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BC**
Lab Sample Id: 625896-056

Matrix: Soil
Date Collected: 05.23.19 08.22

Date Received: 05.30.19 10.58
Sample Depth: 56 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090835

Date Prep: 05.31.19 11.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.1	5.00	mg/kg	05.31.19 15.33		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 21.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 21.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 21.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 21.23	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 21.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.06.19 21.23	
o-Terphenyl	84-15-1	85	%	70-135	06.06.19 21.23	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BC**
Lab Sample Id: 625896-056

Matrix: Soil
Date Collected: 05.23.19 08.22

Date Received: 05.30.19 10.58
Sample Depth: 56 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 09.32

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
Toluene	108-88-3	<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
m,p-Xylenes	179601-23-1	<0.0405	0.0405	mg/kg	06.06.19 02.03	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
Total BTEX		<0.0202	0.0202	mg/kg	06.06.19 02.03	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	06.06.19 02.03		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	06.06.19 02.03		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BD**
Lab Sample Id: 625896-057

Matrix: Soil
Date Collected: 05.23.19 08.25

Date Received: 05.30.19 10.58
Sample Depth: 57 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.9	4.98	mg/kg	05.31.19 16.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 21.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 21.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 21.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 21.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 21.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.06.19 21.48	
o-Terphenyl	84-15-1	83	%	70-135	06.06.19 21.48	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-057

Date Collected: 05.23.19 08.25

Sample Depth: 57 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
Toluene	108-88-3	<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 02.27	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
Total BTEX		<0.0201	0.0201	mg/kg	06.06.19 02.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	68-120	06.06.19 02.27		
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	06.06.19 02.27		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-058

Date Collected: 05.23.19 08.30

Sample Depth: 58 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	5.04	mg/kg	05.31.19 16.19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 22.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 22.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 22.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 22.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	06.06.19 22.12	
o-Terphenyl	84-15-1	106	%	70-135	06.06.19 22.12	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BE**

Matrix: Soil

Date Received: 05.30.19 10:58

Lab Sample Id: 625896-058

Date Collected: 05.23.19 08:30

Sample Depth: 58 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09:32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
Toluene	108-88-3	<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
Ethylbenzene	100-41-4	<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
m,p-Xylenes	179601-23-1	<0.0380	0.0380	mg/kg	06.06.19 02:51	U	1
o-Xylene	95-47-6	<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
Total Xylenes	1330-20-7	<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
Total BTEX		<0.0190	0.0190	mg/kg	06.06.19 02:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 02:51		
a,a,a-Trifluorotoluene	98-08-8	107	%	71-121	06.06.19 02:51		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BF**
Lab Sample Id: 625896-059

Matrix: Soil
Date Collected: 05.23.19 08.32

Date Received: 05.30.19 10.58
Sample Depth: 59 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.10	4.99	mg/kg	05.31.19 16.24		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 22.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 22.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 22.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 22.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 22.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.06.19 22.37	
o-Terphenyl	84-15-1	91	%	70-135	06.06.19 22.37	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BF**
Lab Sample Id: 625896-059

Matrix: Soil
Date Collected: 05.23.19 08.32

Date Received: 05.30.19 10.58
Sample Depth: 59 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: RNL

Seq Number: 3091466

Date Prep: 06.05.19 09.32

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
Toluene	108-88-3	<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
m,p-Xylenes	179601-23-1	<0.0392	0.0392	mg/kg	06.06.19 03.15	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
Total BTEX		<0.0196	0.0196	mg/kg	06.06.19 03.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	68-120	06.06.19 03.15		
a,a,a-Trifluorotoluene	98-08-8	108	%	71-121	06.06.19 03.15		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-060

Date Collected: 05.23.19 08.35

Sample Depth: 60 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.0	4.95	mg/kg	05.31.19 16.30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 23.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 23.01	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.06.19 23.01	
o-Terphenyl	84-15-1	86	%	70-135	06.06.19 23.01	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-060

Date Collected: 05.23.19 08.35

Sample Depth: 60 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.06.19 03.39	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 03.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	68-120	06.06.19 03.39		
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	06.06.19 03.39		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BH**
Lab Sample Id: 625896-061

Matrix: Soil
Date Collected: 05.23.19 08.40

Date Received: 05.30.19 10.58
Sample Depth: 61 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.9	5.00	mg/kg	05.31.19 16.35		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 11.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 11.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 11.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 11.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 11.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	06.05.19 11.56	
o-Terphenyl	84-15-1	110	%	70-135	06.05.19 11.56	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-061

Date Collected: 05.23.19 08.40

Sample Depth: 61 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: RNL

Date Prep: 06.05.19 09.32

Basis: Wet Weight

Seq Number: 3091466

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
m,p-Xylenes	179601-23-1	<0.0399	0.0399	mg/kg	06.05.19 17.37	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
Total BTEX		<0.0200	0.0200	mg/kg	06.05.19 17.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.05.19 17.37		
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	06.05.19 17.37		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BI**
Lab Sample Id: 625896-062

Matrix: Soil
Date Collected: 05.23.19 08.45

Date Received: 05.30.19 10.58
Sample Depth: 62 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.7	5.02	mg/kg	05.31.19 16.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 12.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 12.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 12.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 12.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 12.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.05.19 12.56	
o-Terphenyl	84-15-1	91	%	70-135	06.05.19 12.56	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BI**
Lab Sample Id: 625896-062

Matrix: Soil
Date Collected: 05.23.19 08.45

Date Received: 05.30.19 10.58
Sample Depth: 62 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
m,p-Xylenes	179601-23-1	<0.0409	0.0409	mg/kg	06.06.19 08.52	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 08.52	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.06.19 08.52		
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	06.06.19 08.52		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BJ**
Lab Sample Id: 625896-063

Matrix: Soil
Date Collected: 05.23.19 08.48

Date Received: 05.30.19 10.58
Sample Depth: 63 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.1	4.98	mg/kg	05.31.19 16.55		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 13.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 13.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 13.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 13.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 13.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.05.19 13.16	
o-Terphenyl	84-15-1	89	%	70-135	06.05.19 13.16	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BJ**
Lab Sample Id: 625896-063

Matrix: Soil
Date Collected: 05.23.19 08.48

Date Received: 05.30.19 10.58
Sample Depth: 63 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
Toluene	108-88-3	<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
Ethylbenzene	100-41-4	<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
m,p-Xylenes	179601-23-1	<0.0411	0.0411	mg/kg	06.06.19 09.16	U	1
o-Xylene	95-47-6	<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
Total Xylenes	1330-20-7	<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
Total BTEX		<0.0205	0.0205	mg/kg	06.06.19 09.16	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	06.06.19 09.16		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.06.19 09.16		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BK**
Lab Sample Id: 625896-064

Matrix: Soil
Date Collected: 05.23.19 08.50

Date Received: 05.30.19 10.58
Sample Depth: 64 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.88	5.05	mg/kg	05.31.19 17.00		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 13.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 13.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 13.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 13.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 13.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.05.19 13.37	
o-Terphenyl	84-15-1	91	%	70-135	06.05.19 13.37	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BK**
Lab Sample Id: 625896-064

Matrix: Soil
Date Collected: 05.23.19 08.50

Date Received: 05.30.19 10.58
Sample Depth: 64 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
m,p-Xylenes	179601-23-1	<0.0409	0.0409	mg/kg	06.06.19 09.40	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 09.40	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	68-120	06.06.19 09.40		
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	06.06.19 09.40		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BL**
Lab Sample Id: 625896-065

Matrix: Soil
Date Collected: 05.23.19 08.55

Date Received: 05.30.19 10.58
Sample Depth: 65 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.86	4.98	mg/kg	05.31.19 17.06		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 13.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 13.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 13.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 13.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 13.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.05.19 13.57	
o-Terphenyl	84-15-1	90	%	70-135	06.05.19 13.57	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BL**
Lab Sample Id: 625896-065

Matrix: Soil
Date Collected: 05.23.19 08.55

Date Received: 05.30.19 10.58
Sample Depth: 65 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
Toluene	108-88-3	<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
Ethylbenzene	100-41-4	<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
m,p-Xylenes	179601-23-1	<0.0416	0.0416	mg/kg	06.06.19 10.04	U	1
o-Xylene	95-47-6	<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
Total Xylenes	1330-20-7	<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
Total BTEX		<0.0208	0.0208	mg/kg	06.06.19 10.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	68-120	06.06.19 10.04		
a,a,a-Trifluorotoluene	98-08-8	111	%	71-121	06.06.19 10.04		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-066

Date Collected: 05.23.19 08.58

Sample Depth: 66 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.30	5.00	mg/kg	05.31.19 17.11		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 07.00

Basis: Wet Weight

Seq Number: 3091357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 14.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 14.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 14.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 14.17	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 14.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.05.19 14.17	
o-Terphenyl	84-15-1	93	%	70-135	06.05.19 14.17	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-066

Date Collected: 05.23.19 08.58

Sample Depth: 66 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
Toluene	108-88-3	<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
m,p-Xylenes	179601-23-1	<0.0404	0.0404	mg/kg	06.06.19 10.28	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
Total BTEX		<0.0202	0.0202	mg/kg	06.06.19 10.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	68-120	06.06.19 10.28		
a,a,a-Trifluorotoluene	98-08-8	113	%	71-121	06.06.19 10.28		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BN**
Lab Sample Id: 625896-067

Matrix: Soil
Date Collected: 05.23.19 09.00

Date Received: 05.30.19 10.58
Sample Depth: 67 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.9	5.02	mg/kg	05.31.19 17.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 14.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 14.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 14.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 14.37	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	98	%	70-135	06.05.19 14.37	
84-15-1	98	%	70-135	06.05.19 14.37	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BN**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-067

Date Collected: 05.23.19 09.00

Sample Depth: 67 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
m,p-Xylenes	179601-23-1	<0.0399	0.0399	mg/kg	06.06.19 10.52	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
Total BTEX		<0.0200	0.0200	mg/kg	06.06.19 10.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 10.52		
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	06.06.19 10.52		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BO**
Lab Sample Id: 625896-068

Matrix: Soil
Date Collected: 05.23.19 09.05

Date Received: 05.30.19 10.58
Sample Depth: 68 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.3	4.96	mg/kg	05.31.19 17.31		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 14.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 14.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 14.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 14.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 14.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	06.05.19 14.56	
o-Terphenyl	84-15-1	105	%	70-135	06.05.19 14.56	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BO**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-068

Date Collected: 05.23.19 09.05

Sample Depth: 68 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
Toluene	108-88-3	<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
Ethylbenzene	100-41-4	<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
m,p-Xylenes	179601-23-1	<0.0417	0.0417	mg/kg	06.06.19 11.17	U	1
o-Xylene	95-47-6	<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
Total Xylenes	1330-20-7	<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
Total BTEX		<0.0208	0.0208	mg/kg	06.06.19 11.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 11.17		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	06.06.19 11.17		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BP**
Lab Sample Id: 625896-069

Matrix: Soil
Date Collected: 05.23.19 09.15

Date Received: 05.30.19 10.58
Sample Depth: 69 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.35	4.98	mg/kg	05.31.19 17.36		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 15.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 15.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 15.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 15.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 15.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.05.19 15.16	
o-Terphenyl	84-15-1	95	%	70-135	06.05.19 15.16	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BP**
Lab Sample Id: 625896-069

Matrix: Soil
Date Collected: 05.23.19 09.15

Date Received: 05.30.19 10.58
Sample Depth: 69 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
Toluene	108-88-3	<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
m,p-Xylenes	179601-23-1	<0.0415	0.0415	mg/kg	06.06.19 11.41	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
Total BTEX		<0.0207	0.0207	mg/kg	06.06.19 11.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	68-120	06.06.19 11.41		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	06.06.19 11.41		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BQ**
Lab Sample Id: 625896-070

Matrix: Soil
Date Collected: 05.23.19 09.20

Date Received: 05.30.19 10.58
Sample Depth: 70 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.89	4.95	mg/kg	05.31.19 17.52		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.05.19 15.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.05.19 15.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.05.19 15.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.05.19 15.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.05.19 15.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.05.19 15.36	
o-Terphenyl	84-15-1	90	%	70-135	06.05.19 15.36	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BQ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-070

Date Collected: 05.23.19 09.20

Sample Depth: 70 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 12.06	U	1
Toluene	108-88-3	0.0323	0.0202	mg/kg	06.06.19 12.06		1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 12.06	U	1
m,p-Xylenes	179601-23-1	<0.0403	0.0403	mg/kg	06.06.19 12.06	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 12.06	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 12.06	U	1
Total BTEX		0.0323	0.0202	mg/kg	06.06.19 12.06		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 12.06		
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	06.06.19 12.06		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BR**
Lab Sample Id: 625896-071

Matrix: Soil
Date Collected: 05.23.19 09.25

Date Received: 05.30.19 10.58
Sample Depth: 71 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.34	5.03	mg/kg	05.31.19 17.57		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.06.19 05.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	53.2	14.9	mg/kg	06.06.19 05.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.06.19 05.48	U	1
Total TPH	PHC635	53.2	14.9	mg/kg	06.06.19 05.48		1
Total GRO-DRO	PHC628	53.2	14.9	mg/kg	06.06.19 05.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.06.19 05.48	
o-Terphenyl	84-15-1	90	%	70-135	06.06.19 05.48	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BR**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-071

Date Collected: 05.23.19 09.25

Sample Depth: 71 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 13.42	U	1
Toluene	108-88-3	0.0221	0.0201	mg/kg	06.06.19 13.42		1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 13.42	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 13.42	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 13.42	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 13.42	U	1
Total BTEX		0.0221	0.0201	mg/kg	06.06.19 13.42		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	68-120	06.06.19 13.42		
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	06.06.19 13.42		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BS**
Lab Sample Id: 625896-072

Matrix: Soil
Date Collected: 05.23.19 09.30

Date Received: 05.30.19 10.58
Sample Depth: 72 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.31	4.99	mg/kg	05.31.19 18.02		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 06.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 06.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 06.12	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 06.12	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 06.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.06.19 06.12	
o-Terphenyl	84-15-1	71	%	70-135	06.06.19 06.12	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BS**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-072

Date Collected: 05.23.19 09.30

Sample Depth: 72 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
Toluene	108-88-3	<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 14.07	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
Total BTEX		<0.0201	0.0201	mg/kg	06.06.19 14.07	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	68-120	06.06.19 14.07		
a,a,a-Trifluorotoluene	98-08-8	112	%	71-121	06.06.19 14.07		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BT**
Lab Sample Id: 625896-073

Matrix: Soil
Date Collected: 05.23.19 09.35

Date Received: 05.30.19 10.58
Sample Depth: 73 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090836

Date Prep: 05.31.19 12.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.18	4.96	mg/kg	05.31.19 18.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 06.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 06.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 06.37	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 06.37	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 06.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.06.19 06.37	
o-Terphenyl	84-15-1	67	%	70-135	06.06.19 06.37	**



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BT**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-073

Date Collected: 05.23.19 09.35

Sample Depth: 73 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
Toluene	108-88-3	<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
m,p-Xylenes	179601-23-1	<0.0401	0.0401	mg/kg	06.06.19 14.31	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
Total BTEX		<0.0200	0.0200	mg/kg	06.06.19 14.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	68-120	06.06.19 14.31		
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	06.06.19 14.31		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-074

Date Collected: 05.23.19 09.40

Sample Depth: 74 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.18	4.95	mg/kg	05.31.19 18.12		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 07.00

Basis: Wet Weight

Seq Number: 3091357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 07.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 07.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 07.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 07.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 07.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.06.19 07.02	
o-Terphenyl	84-15-1	65	%	70-135	06.06.19 07.02	**



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-074

Date Collected: 05.23.19 09.40

Sample Depth: 74 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
Toluene	108-88-3	<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.06.19 14.55	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
Total BTEX		<0.0199	0.0199	mg/kg	06.06.19 14.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	68-120	06.06.19 14.55		
a,a,a-Trifluorotoluene	98-08-8	114	%	71-121	06.06.19 14.55		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-075

Date Collected: 05.23.19 09.45

Sample Depth: 75 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.85	5.04	mg/kg	05.31.19 18.18		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 07.00

Basis: Wet Weight

Seq Number: 3091357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.06.19 07.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.06.19 07.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.06.19 07.26	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.06.19 07.26	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.06.19 07.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.06.19 07.26	
o-Terphenyl	84-15-1	64	%	70-135	06.06.19 07.26	**



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-075

Date Collected: 05.23.19 09.45

Sample Depth: 75 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 15.20	U	1
Toluene	108-88-3	0.0542	0.0201	mg/kg	06.06.19 15.20		1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 15.20	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 15.20	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 15.20	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 15.20	U	1
Total BTEX		0.0542	0.0201	mg/kg	06.06.19 15.20		1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		103	%	68-120	06.06.19 15.20	
a,a,a-Trifluorotoluene	98-08-8		108	%	71-121	06.06.19 15.20	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-076

Date Collected: 05.23.19 09.50

Sample Depth: 76 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.00

Basis: Wet Weight

Seq Number: 3090836

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.08	4.99	mg/kg	05.31.19 18.23		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 07.00

Basis: Wet Weight

Seq Number: 3091357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 07.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 07.51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 07.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 07.51	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 07.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.06.19 07.51	
o-Terphenyl	84-15-1	81	%	70-135	06.06.19 07.51	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-076

Date Collected: 05.23.19 09.50

Sample Depth: 76 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.06.19 16.37	U	1
Toluene	108-88-3	0.0319	0.0199	mg/kg	06.06.19 16.37		1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.06.19 16.37	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.06.19 16.37	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.06.19 16.37	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.06.19 16.37	U	1
Total BTEX		0.0319	0.0199	mg/kg	06.06.19 16.37		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	68-120	06.06.19 16.37		
a,a,a-Trifluorotoluene	98-08-8	109	%	71-121	06.06.19 16.37		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BX**
Lab Sample Id: 625896-077

Matrix: Soil
Date Collected: 05.23.19 09.55

Date Received: 05.30.19 10.58
Sample Depth: 77 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.48	5.00	mg/kg	05.31.19 18.54		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3091357

Date Prep: 06.05.19 07.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 08.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 08.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 08.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 08.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 08.16	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.06.19 08.16		
o-Terphenyl	84-15-1	72	%	70-135	06.06.19 08.16		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BX**
Lab Sample Id: 625896-077

Matrix: Soil
Date Collected: 05.23.19 09.55

Date Received: 05.30.19 10.58
Sample Depth: 77 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091480

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 17.01	U	1
Toluene	108-88-3	0.0611	0.0204	mg/kg	06.06.19 17.01		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 17.01	U	1
m,p-Xylenes	179601-23-1	<0.0407	0.0407	mg/kg	06.06.19 17.01	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 17.01	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 17.01	U	1
Total BTEX		0.0611	0.0204	mg/kg	06.06.19 17.01		1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		105	%	68-120	06.06.19 17.01	
a,a,a-Trifluorotoluene	98-08-8		108	%	71-121	06.06.19 17.01	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BY**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-078

Date Collected: 05.23.19 10.00

Sample Depth: 78 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	4.96	mg/kg	05.31.19 19.09		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 07.00

Basis: Wet Weight

Seq Number: 3091357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 08.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 08.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 08.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 08.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 08.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.06.19 08.41	
o-Terphenyl	84-15-1	75	%	70-135	06.06.19 08.41	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BY**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-078

Date Collected: 05.23.19 10.00

Sample Depth: 78 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0205	0.0205	mg/kg	06.06.19 17.26	U	1
Toluene	108-88-3	0.0594	0.0205	mg/kg	06.06.19 17.26		1
Ethylbenzene	100-41-4	<0.0205	0.0205	mg/kg	06.06.19 17.26	U	1
m,p-Xylenes	179601-23-1	<0.0410	0.0410	mg/kg	06.06.19 17.26	U	1
o-Xylene	95-47-6	<0.0205	0.0205	mg/kg	06.06.19 17.26	U	1
Total Xylenes	1330-20-7	<0.0205	0.0205	mg/kg	06.06.19 17.26	U	1
Total BTEX		0.0594	0.0205	mg/kg	06.06.19 17.26		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	68-120	06.06.19 17.26		
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	06.06.19 17.26		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BZ**
Lab Sample Id: 625896-079

Matrix: Soil
Date Collected: 05.23.19 10.05

Date Received: 05.30.19 10.58
Sample Depth: 79 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	105	5.03	mg/kg	05.31.19 19.14		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 23.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 23.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 23.25	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.06.19 23.25	
o-Terphenyl	84-15-1	89	%	70-135	06.06.19 23.25	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01BZ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-079

Date Collected: 05.23.19 10.05

Sample Depth: 79 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 17.50	U	1
Toluene	108-88-3	0.0443	0.0201	mg/kg	06.06.19 17.50		1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 17.50	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 17.50	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 17.50	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 17.50	U	1
Total BTEX		0.0443	0.0201	mg/kg	06.06.19 17.50		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 17.50		
a,a,a-Trifluorotoluene	98-08-8	110	%	71-121	06.06.19 17.50		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-080

Date Collected: 05.23.19 10.10

Sample Depth: 80 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.0	4.99	mg/kg	05.31.19 19.19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 23.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 23.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 23.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 23.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 23.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.06.19 23.49	
o-Terphenyl	84-15-1	80	%	70-135	06.06.19 23.49	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-080

Date Collected: 05.23.19 10.10

Sample Depth: 80 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.06.19 18.14	U	1
Toluene	108-88-3	0.0415	0.0207	mg/kg	06.06.19 18.14		1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.06.19 18.14	U	1
m,p-Xylenes	179601-23-1	<0.0415	0.0415	mg/kg	06.06.19 18.14	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.06.19 18.14	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.06.19 18.14	U	1
Total BTEX		0.0415	0.0207	mg/kg	06.06.19 18.14		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	114	%	68-120	06.06.19 18.14		
a,a,a-Trifluorotoluene	98-08-8	115	%	71-121	06.06.19 18.14		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CB**
Lab Sample Id: 625896-081

Matrix: Soil
Date Collected: 05.23.19 10.15

Date Received: 05.30.19 10.58
Sample Depth: 81 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.23	5.00	mg/kg	05.31.19 19.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 13.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 13.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 13.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 13.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 13.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.02.19 13.11	
o-Terphenyl	84-15-1	89	%	70-135	06.02.19 13.11	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CB**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-081

Date Collected: 05.23.19 10.15

Sample Depth: 81 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091480

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0206	0.0206	mg/kg	06.06.19 07.17	U	1
Toluene	108-88-3	0.0432	0.0206	mg/kg	06.06.19 07.17		1
Ethylbenzene	100-41-4	<0.0206	0.0206	mg/kg	06.06.19 07.17	U	1
m,p-Xylenes	179601-23-1	<0.0412	0.0412	mg/kg	06.06.19 07.17	U	1
o-Xylene	95-47-6	<0.0206	0.0206	mg/kg	06.06.19 07.17	U	1
Total Xylenes	1330-20-7	<0.0206	0.0206	mg/kg	06.06.19 07.17	U	1
Total BTEX		0.0432	0.0206	mg/kg	06.06.19 07.17		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	68-120	06.06.19 07.17		
a,a,a-Trifluorotoluene	98-08-8	106	%	71-121	06.06.19 07.17		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CC**
Lab Sample Id: 625896-082

Matrix: Soil
Date Collected: 05.23.19 10.17

Date Received: 05.30.19 10.58
Sample Depth: 82 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.16	5.01	mg/kg	05.31.19 19.40		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 14.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 14.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 14.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 14.11	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 14.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.02.19 14.11	
o-Terphenyl	84-15-1	89	%	70-135	06.02.19 14.11	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CC**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-082

Date Collected: 05.23.19 10.17

Sample Depth: 82 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.05.19 22.46	U	1
Toluene	108-88-3	0.0220	0.0200	mg/kg	06.05.19 22.46		1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.05.19 22.46	U	1
m,p-Xylenes	179601-23-1	<0.0401	0.0401	mg/kg	06.05.19 22.46	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.05.19 22.46	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.05.19 22.46	U	1
Total BTEX		0.0220	0.0200	mg/kg	06.05.19 22.46		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	06.05.19 22.46		
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	06.05.19 22.46		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-083

Date Collected: 05.23.19 10.20

Sample Depth: 83 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.19	5.05	mg/kg	05.31.19 19.45		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.19 14.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.19 14.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 14.31	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.19 14.31	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.02.19 14.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 14.31	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 14.31	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-083

Date Collected: 05.23.19 10.20

Sample Depth: 83 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
Toluene	108-88-3	<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
m,p-Xylenes	179601-23-1	<0.0404	0.0404	mg/kg	06.05.19 23.13	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
Total BTEX		<0.0202	0.0202	mg/kg	06.05.19 23.13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	68-120	06.05.19 23.13		
a,a,a-Trifluorotoluene	98-08-8	102	%	71-121	06.05.19 23.13		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CE**
Lab Sample Id: 625896-084

Matrix: Soil
Date Collected: 05.23.19 10.25

Date Received: 05.30.19 10.58
Sample Depth: 84 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 19.50	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 14.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 14.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 14.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 14.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 14.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.02.19 14.50	
o-Terphenyl	84-15-1	92	%	70-135	06.02.19 14.50	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-084

Date Collected: 05.23.19 10.25

Sample Depth: 84 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.05.19 23.40	U	1
Toluene	108-88-3	0.0265	0.0204	mg/kg	06.05.19 23.40		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.05.19 23.40	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.05.19 23.40	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.05.19 23.40	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.05.19 23.40	U	1
Total BTEX		0.0265	0.0204	mg/kg	06.05.19 23.40		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	06.05.19 23.40		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.05.19 23.40		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CF**
Lab Sample Id: 625896-085

Matrix: Soil
Date Collected: 05.23.19 10.28

Date Received: 05.30.19 10.58
Sample Depth: 85 ft

Analytical Method: Chloride by EPA 300
Tech: CHE
Analyst: CHE
Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 19.55	U	1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.19 15.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.19 15.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 15.10	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.19 15.10	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.02.19 15.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.02.19 15.10	
o-Terphenyl	84-15-1	89	%	70-135	06.02.19 15.10	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CF**
Lab Sample Id: 625896-085

Matrix: Soil
Date Collected: 05.23.19 10.28

Date Received: 05.30.19 10.58
Sample Depth: 85 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091490

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 00.07	U	1
Toluene	108-88-3	0.0444	0.0202	mg/kg	06.06.19 00.07		1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 00.07	U	1
m,p-Xylenes	179601-23-1	<0.0403	0.0403	mg/kg	06.06.19 00.07	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 00.07	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 00.07	U	1
Total BTEX		0.0444	0.0202	mg/kg	06.06.19 00.07		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	06.06.19 00.07		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.06.19 00.07		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CG**
Lab Sample Id: 625896-086

Matrix: Soil
Date Collected: 05.23.19 10.30

Date Received: 05.30.19 10.58
Sample Depth: 86 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 20.01	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 15.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 15.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 15.29	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 15.29	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 15.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 15.29	
o-Terphenyl	84-15-1	91	%	70-135	06.02.19 15.29	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-086

Date Collected: 05.23.19 10.30

Sample Depth: 86 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0203	0.0203	mg/kg	06.06.19 00.34	U	1
Toluene	108-88-3	0.0385	0.0203	mg/kg	06.06.19 00.34		1
Ethylbenzene	100-41-4	<0.0203	0.0203	mg/kg	06.06.19 00.34	U	1
m,p-Xylenes	179601-23-1	<0.0406	0.0406	mg/kg	06.06.19 00.34	U	1
o-Xylene	95-47-6	<0.0203	0.0203	mg/kg	06.06.19 00.34	U	1
Total Xylenes	1330-20-7	<0.0203	0.0203	mg/kg	06.06.19 00.34	U	1
Total BTEX		0.0385	0.0203	mg/kg	06.06.19 00.34		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100		%	68-120	06.06.19 00.34	
a,a,a-Trifluorotoluene	98-08-8	100		%	71-121	06.06.19 00.34	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-087

Date Collected: 05.23.19 10.32

Sample Depth: 87 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 20.06	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 15.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 15.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 15.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 15.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 15.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	06.02.19 15.49	
o-Terphenyl	84-15-1	105	%	70-135	06.02.19 15.49	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-087

Date Collected: 05.23.19 10.32

Sample Depth: 87 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0198	0.0198	mg/kg	06.06.19 01.02	U	1
Toluene	108-88-3	0.0297	0.0198	mg/kg	06.06.19 01.02		1
Ethylbenzene	100-41-4	<0.0198	0.0198	mg/kg	06.06.19 01.02	U	1
m,p-Xylenes	179601-23-1	<0.0396	0.0396	mg/kg	06.06.19 01.02	U	1
o-Xylene	95-47-6	<0.0198	0.0198	mg/kg	06.06.19 01.02	U	1
Total Xylenes	1330-20-7	<0.0198	0.0198	mg/kg	06.06.19 01.02	U	1
Total BTEX		0.0297	0.0198	mg/kg	06.06.19 01.02		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 01.02		
a,a,a-Trifluorotoluene	98-08-8	104	%	71-121	06.06.19 01.02		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CI**
Lab Sample Id: 625896-088

Matrix: Soil
Date Collected: 05.23.19 10.34

Date Received: 05.30.19 10.58
Sample Depth: 88 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.30	4.96	mg/kg	05.31.19 20.21		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 16.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 16.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 16.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 16.08	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 16.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.02.19 16.08	
o-Terphenyl	84-15-1	91	%	70-135	06.02.19 16.08	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CI**
Lab Sample Id: 625896-088

Matrix: Soil
Date Collected: 05.23.19 10.34

Date Received: 05.30.19 10.58
Sample Depth: 88 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091490

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0196	0.0196	mg/kg	06.06.19 01.29	U	1
Toluene	108-88-3	0.0333	0.0196	mg/kg	06.06.19 01.29		1
Ethylbenzene	100-41-4	<0.0196	0.0196	mg/kg	06.06.19 01.29	U	1
m,p-Xylenes	179601-23-1	<0.0391	0.0391	mg/kg	06.06.19 01.29	U	1
o-Xylene	95-47-6	<0.0196	0.0196	mg/kg	06.06.19 01.29	U	1
Total Xylenes	1330-20-7	<0.0196	0.0196	mg/kg	06.06.19 01.29	U	1
Total BTEX		0.0333	0.0196	mg/kg	06.06.19 01.29		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	06.06.19 01.29		
a,a,a-Trifluorotoluene	98-08-8	101	%	71-121	06.06.19 01.29		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CJ**
Lab Sample Id: 625896-089

Matrix: Soil
Date Collected: 05.23.19 10.36

Date Received: 05.30.19 10.58
Sample Depth: 89 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	05.31.19 20.26	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 16.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 16.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 16.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 16.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 16.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.02.19 16.28	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 16.28	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CJ**
Lab Sample Id: 625896-089

Matrix: Soil
Date Collected: 05.23.19 10.36

Date Received: 05.30.19 10.58
Sample Depth: 89 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091490

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0197	0.0197	mg/kg	06.06.19 01.56	U	1
Toluene	108-88-3	0.0295	0.0197	mg/kg	06.06.19 01.56		1
Ethylbenzene	100-41-4	<0.0197	0.0197	mg/kg	06.06.19 01.56	U	1
m,p-Xylenes	179601-23-1	<0.0394	0.0394	mg/kg	06.06.19 01.56	U	1
o-Xylene	95-47-6	<0.0197	0.0197	mg/kg	06.06.19 01.56	U	1
Total Xylenes	1330-20-7	<0.0197	0.0197	mg/kg	06.06.19 01.56	U	1
Total BTEX		0.0295	0.0197	mg/kg	06.06.19 01.56		1
		% Recovery					
Surrogate	Cas Number			Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		63	%	68-120	06.06.19 01.56	**
a,a,a-Trifluorotoluene	98-08-8		71	%	71-121	06.06.19 01.56	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CK**
Lab Sample Id: 625896-090

Matrix: Soil
Date Collected: 05.23.19 10.38

Date Received: 05.30.19 10.58
Sample Depth: 90 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	05.31.19 20.42	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 16.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 16.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 16.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 16.48	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 16.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 16.48	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 16.48	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CK**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-090

Date Collected: 05.23.19 10.38

Sample Depth: 90 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0193	0.0193	mg/kg	06.06.19 02.22	U	1
Toluene	108-88-3	0.0270	0.0193	mg/kg	06.06.19 02.22		1
Ethylbenzene	100-41-4	<0.0193	0.0193	mg/kg	06.06.19 02.22	U	1
m,p-Xylenes	179601-23-1	<0.0385	0.0385	mg/kg	06.06.19 02.22	U	1
o-Xylene	95-47-6	<0.0193	0.0193	mg/kg	06.06.19 02.22	U	1
Total Xylenes	1330-20-7	<0.0193	0.0193	mg/kg	06.06.19 02.22	U	1
Total BTEX		0.0270	0.0193	mg/kg	06.06.19 02.22		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	06.06.19 02.22		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 02.22		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CL**
Lab Sample Id: 625896-091

Matrix: Soil
Date Collected: 05.23.19 10.40

Date Received: 05.30.19 10.58
Sample Depth: 91 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.44	5.00	mg/kg	05.31.19 20.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 17.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 17.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 17.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 17.27	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 17.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.02.19 17.27	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 17.27	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CL**
Lab Sample Id: 625896-091

Matrix: Soil
Date Collected: 05.23.19 10.40

Date Received: 05.30.19 10.58
Sample Depth: 91 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091490

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0205	0.0205	mg/kg	06.06.19 04.10	U	1
Toluene	108-88-3	0.0266	0.0205	mg/kg	06.06.19 04.10		1
Ethylbenzene	100-41-4	<0.0205	0.0205	mg/kg	06.06.19 04.10	U	1
m,p-Xylenes	179601-23-1	<0.0410	0.0410	mg/kg	06.06.19 04.10	U	1
o-Xylene	95-47-6	<0.0205	0.0205	mg/kg	06.06.19 04.10	U	1
Total Xylenes	1330-20-7	<0.0205	0.0205	mg/kg	06.06.19 04.10	U	1
Total BTEX		0.0266	0.0205	mg/kg	06.06.19 04.10		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	68-120	06.06.19 04.10		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 04.10		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-092

Date Collected: 05.23.19 10.42

Sample Depth: 92 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 20.52	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 17.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 17.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 17.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 17.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 17.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.02.19 17.47	
o-Terphenyl	84-15-1	89	%	70-135	06.02.19 17.47	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CM**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-092

Date Collected: 05.23.19 10.42

Sample Depth: 92 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0195	0.0195	mg/kg	06.06.19 04.37	U	1
Toluene	108-88-3	0.0331	0.0195	mg/kg	06.06.19 04.37		1
Ethylbenzene	100-41-4	<0.0195	0.0195	mg/kg	06.06.19 04.37	U	1
m,p-Xylenes	179601-23-1	<0.0389	0.0389	mg/kg	06.06.19 04.37	U	1
o-Xylene	95-47-6	<0.0195	0.0195	mg/kg	06.06.19 04.37	U	1
Total Xylenes	1330-20-7	<0.0195	0.0195	mg/kg	06.06.19 04.37	U	1
Total BTEX		0.0331	0.0195	mg/kg	06.06.19 04.37		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4		97	%	68-120	06.06.19 04.37	
a,a,a-Trifluorotoluene	98-08-8		101	%	71-121	06.06.19 04.37	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CN**
Lab Sample Id: 625896-093

Matrix: Soil
Date Collected: 05.23.19 10.46

Date Received: 05.30.19 10.58
Sample Depth: 93 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	05.31.19 20.57	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 18.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 18.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 18.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 18.06	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 18.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 18.06	
o-Terphenyl	84-15-1	89	%	70-135	06.02.19 18.06	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CN**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-093

Date Collected: 05.23.19 10.46

Sample Depth: 93 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 05.04	U	1
Toluene	108-88-3	0.0364	0.0202	mg/kg	06.06.19 05.04		1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 05.04	U	1
m,p-Xylenes	179601-23-1	<0.0404	0.0404	mg/kg	06.06.19 05.04	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 05.04	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 05.04	U	1
Total BTEX		0.0364	0.0202	mg/kg	06.06.19 05.04		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 05.04		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.06.19 05.04		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CO**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-094

Date Collected: 05.23.19 10.48

Sample Depth: 94 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	05.31.19 21.02	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.19 18.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.19 18.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 18.26	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.19 18.26	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.02.19 18.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.02.19 18.26	
o-Terphenyl	84-15-1	87	%	70-135	06.02.19 18.26	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CO**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-094

Date Collected: 05.23.19 10.48

Sample Depth: 94 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0205	0.0205	mg/kg	06.06.19 05.31	U	1
Toluene	108-88-3	0.0328	0.0205	mg/kg	06.06.19 05.31		1
Ethylbenzene	100-41-4	<0.0205	0.0205	mg/kg	06.06.19 05.31	U	1
m,p-Xylenes	179601-23-1	<0.0410	0.0410	mg/kg	06.06.19 05.31	U	1
o-Xylene	95-47-6	<0.0205	0.0205	mg/kg	06.06.19 05.31	U	1
Total Xylenes	1330-20-7	<0.0205	0.0205	mg/kg	06.06.19 05.31	U	1
Total BTEX		0.0328	0.0205	mg/kg	06.06.19 05.31		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 05.31		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.06.19 05.31		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CP**
Lab Sample Id: 625896-095

Matrix: Soil
Date Collected: 05.23.19 10.50

Date Received: 05.30.19 10.58
Sample Depth: 95 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090839

Date Prep: 05.31.19 12.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	05.31.19 21.07	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091213

Date Prep: 06.02.19 09.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.19 18.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.19 18.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 18.45	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.19 18.45	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.02.19 18.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	06.02.19 18.45	
o-Terphenyl	84-15-1	103	%	70-135	06.02.19 18.45	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CP**
Lab Sample Id: 625896-095

Matrix: Soil
Date Collected: 05.23.19 10.50

Date Received: 05.30.19 10.58
Sample Depth: 95 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091490

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.06.19 05.58	U	1
Toluene	108-88-3	0.0279	0.0200	mg/kg	06.06.19 05.58		1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.06.19 05.58	U	1
m,p-Xylenes	179601-23-1	<0.0399	0.0399	mg/kg	06.06.19 05.58	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.06.19 05.58	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.06.19 05.58	U	1
Total BTEX		0.0279	0.0200	mg/kg	06.06.19 05.58		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	68-120	06.06.19 05.58		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 05.58		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CQ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-096

Date Collected: 05.23.19 10.53

Sample Depth: 96 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 12.15

Basis: Wet Weight

Seq Number: 3090839

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	05.31.19 21.13	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 19.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 19.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 19.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 19.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 19.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	06.02.19 19.05	
o-Terphenyl	84-15-1	105	%	70-135	06.02.19 19.05	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CQ**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-096

Date Collected: 05.23.19 10.53

Sample Depth: 96 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.06.19 06.25	U	1
Toluene	108-88-3	0.0381	0.0200	mg/kg	06.06.19 06.25		1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.06.19 06.25	U	1
m,p-Xylenes	179601-23-1	<0.0401	0.0401	mg/kg	06.06.19 06.25	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.06.19 06.25	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.06.19 06.25	U	1
Total BTEX		0.0381	0.0200	mg/kg	06.06.19 06.25		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 06.25		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.06.19 06.25		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CR**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-097

Date Collected: 05.23.19 10.55

Sample Depth: 97 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.86	5.02	mg/kg	05.31.19 20.34		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 19.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 19.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 19.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 19.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 19.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 19.24	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 19.24	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CR**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-097

Date Collected: 05.23.19 10.55

Sample Depth: 97 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0210	0.0210	mg/kg	06.06.19 06.52	U	1
Toluene	108-88-3	0.0252	0.0210	mg/kg	06.06.19 06.52		1
Ethylbenzene	100-41-4	<0.0210	0.0210	mg/kg	06.06.19 06.52	U	1
m,p-Xylenes	179601-23-1	<0.0420	0.0420	mg/kg	06.06.19 06.52	U	1
o-Xylene	95-47-6	<0.0210	0.0210	mg/kg	06.06.19 06.52	U	1
Total Xylenes	1330-20-7	<0.0210	0.0210	mg/kg	06.06.19 06.52	U	1
Total BTEX		0.0252	0.0210	mg/kg	06.06.19 06.52		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	06.06.19 06.52		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 06.52		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CS**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-098

Date Collected: 05.23.19 10.58

Sample Depth: 98 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.96	4.95	mg/kg	05.31.19 20.56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 19.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 19.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 19.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 19.43	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 19.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.02.19 19.43	
o-Terphenyl	84-15-1	93	%	70-135	06.02.19 19.43	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CS**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-098

Date Collected: 05.23.19 10.58

Sample Depth: 98 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0197	0.0197	mg/kg	06.06.19 07.18	U	1
Toluene	108-88-3	0.0354	0.0197	mg/kg	06.06.19 07.18		1
Ethylbenzene	100-41-4	<0.0197	0.0197	mg/kg	06.06.19 07.18	U	1
m,p-Xylenes	179601-23-1	<0.0394	0.0394	mg/kg	06.06.19 07.18	U	1
o-Xylene	95-47-6	<0.0197	0.0197	mg/kg	06.06.19 07.18	U	1
Total Xylenes	1330-20-7	<0.0197	0.0197	mg/kg	06.06.19 07.18	U	1
Total BTEX		0.0354	0.0197	mg/kg	06.06.19 07.18		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 07.18		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	06.06.19 07.18		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CT**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-099

Date Collected: 05.23.19 11.00

Sample Depth: 99 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.3	5.01	mg/kg	05.31.19 21.03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 20.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 20.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 20.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 20.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 20.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.02.19 20.02	
o-Terphenyl	84-15-1	104	%	70-135	06.02.19 20.02	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CT**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-099

Date Collected: 05.23.19 11.00

Sample Depth: 99 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.06.19 07.45	U	1
Toluene	108-88-3	0.0358	0.0199	mg/kg	06.06.19 07.45		1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.06.19 07.45	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.06.19 07.45	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.06.19 07.45	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.06.19 07.45	U	1
Total BTEX		0.0358	0.0199	mg/kg	06.06.19 07.45		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	68-120	06.06.19 07.45		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 07.45		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-100

Date Collected: 05.23.19 11.05

Sample Depth: 100 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	05.31.19 21.10	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 09.00

Basis: Wet Weight

Seq Number: 3091213

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 20.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 20.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 20.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 20.22	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 20.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.02.19 20.22	
o-Terphenyl	84-15-1	105	%	70-135	06.02.19 20.22	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CU**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-100

Date Collected: 05.23.19 11.05

Sample Depth: 100 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.05.19 20.58	U	1
Toluene	108-88-3	0.0278	0.0199	mg/kg	06.05.19 20.58		1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.05.19 20.58	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.05.19 20.58	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.05.19 20.58	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.05.19 20.58	U	1
Total BTEX		0.0278	0.0199	mg/kg	06.05.19 20.58		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.05.19 20.58		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.05.19 20.58		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-101

Date Collected: 05.23.19 11.10

Sample Depth: 101 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.16	4.96	mg/kg	05.31.19 21.18		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 14.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 14.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 14.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 14.45	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 14.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.06.19 14.45	
o-Terphenyl	84-15-1	92	%	70-135	06.06.19 14.45	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CV**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-101

Date Collected: 05.23.19 11.10

Sample Depth: 101 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091490

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
Toluene	108-88-3	<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
m,p-Xylenes	179601-23-1	<0.0413	0.0413	mg/kg	06.06.19 08.12	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
Total BTEX		<0.0207	0.0207	mg/kg	06.06.19 08.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	68-120	06.06.19 08.12		
a,a,a-Trifluorotoluene	98-08-8	100	%	71-121	06.06.19 08.12		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-102

Date Collected: 05.23.19 11.15

Sample Depth: 102 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.9	5.00	mg/kg	05.31.19 21.39		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 15.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 15.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 15.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 15.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 15.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.06.19 15.59	
o-Terphenyl	84-15-1	88	%	70-135	06.06.19 15.59	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CW**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-102

Date Collected: 05.23.19 11.15

Sample Depth: 102 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.06.19 14.02	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 14.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	68-120	06.06.19 14.02		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	06.06.19 14.02		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CX**
Lab Sample Id: 625896-103

Matrix: Soil
Date Collected: 05.23.19 11.20

Date Received: 05.30.19 10.58
Sample Depth: 103 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.8	5.03	mg/kg	05.31.19 21.47		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 16.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 16.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 16.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 16.24	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 16.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.06.19 16.24	
o-Terphenyl	84-15-1	85	%	70-135	06.06.19 16.24	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CX**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-103

Date Collected: 05.23.19 11.20

Sample Depth: 103 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0205	0.0205	mg/kg	06.06.19 14.29	U	1
Toluene	108-88-3	0.0308	0.0205	mg/kg	06.06.19 14.29		1
Ethylbenzene	100-41-4	<0.0205	0.0205	mg/kg	06.06.19 14.29	U	1
m,p-Xylenes	179601-23-1	<0.0411	0.0411	mg/kg	06.06.19 14.29	U	1
o-Xylene	95-47-6	<0.0205	0.0205	mg/kg	06.06.19 14.29	U	1
Total Xylenes	1330-20-7	<0.0205	0.0205	mg/kg	06.06.19 14.29	U	1
Total BTEX		0.0308	0.0205	mg/kg	06.06.19 14.29		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	06.06.19 14.29		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 14.29		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CY**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-104

Date Collected: 05.23.19 11.25

Sample Depth: 104 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.70	4.97	mg/kg	05.31.19 21.54		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 16.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 16.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 16.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 16.50	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 16.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.06.19 16.50	
o-Terphenyl	84-15-1	80	%	70-135	06.06.19 16.50	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CY**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-104

Date Collected: 05.23.19 11.25

Sample Depth: 104 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0197	0.0197	mg/kg	06.06.19 14.56	U	1
Toluene	108-88-3	0.0315	0.0197	mg/kg	06.06.19 14.56		1
Ethylbenzene	100-41-4	<0.0197	0.0197	mg/kg	06.06.19 14.56	U	1
m,p-Xylenes	179601-23-1	<0.0394	0.0394	mg/kg	06.06.19 14.56	U	1
o-Xylene	95-47-6	<0.0197	0.0197	mg/kg	06.06.19 14.56	U	1
Total Xylenes	1330-20-7	<0.0197	0.0197	mg/kg	06.06.19 14.56	U	1
Total BTEX		0.0315	0.0197	mg/kg	06.06.19 14.56		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	68-120	06.06.19 14.56		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 14.56		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CZ**
Lab Sample Id: 625896-105

Matrix: Soil
Date Collected: 05.23.19 11.30

Date Received: 05.30.19 10.58
Sample Depth: 105 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	05.31.19 22.01	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 17.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	32.4	15.0	mg/kg	06.06.19 17.15		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 17.15	U	1
Total TPH	PHC635	32.4	15.0	mg/kg	06.06.19 17.15		1
Total GRO-DRO	PHC628	32.4	15.0	mg/kg	06.06.19 17.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.06.19 17.15	
o-Terphenyl	84-15-1	74	%	70-135	06.06.19 17.15	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01CZ**
Lab Sample Id: 625896-105

Matrix: Soil
Date Collected: 05.23.19 11.30

Date Received: 05.30.19 10.58
Sample Depth: 105 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091494

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0200	0.0200	mg/kg	06.06.19 15.24	U	1
Toluene	108-88-3	0.0240	0.0200	mg/kg	06.06.19 15.24		1
Ethylbenzene	100-41-4	<0.0200	0.0200	mg/kg	06.06.19 15.24	U	1
m,p-Xylenes	179601-23-1	<0.0401	0.0401	mg/kg	06.06.19 15.24	U	1
o-Xylene	95-47-6	<0.0200	0.0200	mg/kg	06.06.19 15.24	U	1
Total Xylenes	1330-20-7	<0.0200	0.0200	mg/kg	06.06.19 15.24	U	1
Total BTEX		0.0240	0.0200	mg/kg	06.06.19 15.24		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	68-120	06.06.19 15.24		
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	06.06.19 15.24		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DA**
Lab Sample Id: 625896-106

Matrix: Soil
Date Collected: 05.23.19 11.40

Date Received: 05.30.19 10.58
Sample Depth: 106 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.50	4.99	mg/kg	05.31.19 22.08		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 17.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	23.3	15.0	mg/kg	06.06.19 17.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 17.40	U	1
Total TPH	PHC635	23.3	15.0	mg/kg	06.06.19 17.40		1
Total GRO-DRO	PHC628	23.3	15.0	mg/kg	06.06.19 17.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.06.19 17.40	
o-Terphenyl	84-15-1	88	%	70-135	06.06.19 17.40	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DA**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-106

Date Collected: 05.23.19 11.40

Sample Depth: 106 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0201	0.0201	mg/kg	06.06.19 16.40	U	1
Toluene	108-88-3	0.0483	0.0201	mg/kg	06.06.19 16.40		1
Ethylbenzene	100-41-4	<0.0201	0.0201	mg/kg	06.06.19 16.40	U	1
m,p-Xylenes	179601-23-1	<0.0402	0.0402	mg/kg	06.06.19 16.40	U	1
o-Xylene	95-47-6	<0.0201	0.0201	mg/kg	06.06.19 16.40	U	1
Total Xylenes	1330-20-7	<0.0201	0.0201	mg/kg	06.06.19 16.40	U	1
Total BTEX		0.0483	0.0201	mg/kg	06.06.19 16.40		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	68-120	06.06.19 16.40		
a,a,a-Trifluorotoluene	98-08-8	128	%	71-121	06.06.19 16.40	**	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DB**
Lab Sample Id: 625896-107

Matrix: Soil
Date Collected: 05.23.19 11.45

Date Received: 05.30.19 10.58
Sample Depth: 107 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.74	5.00	mg/kg	05.31.19 22.16		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091571

Date Prep: 06.05.19 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 18.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 18.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 18.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 18.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 18.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.06.19 18.05	
o-Terphenyl	84-15-1	97	%	70-135	06.06.19 18.05	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DB**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-107

Date Collected: 05.23.19 11.45

Sample Depth: 107 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0206	0.0206	mg/kg	06.06.19 17.07	U	1
Toluene	108-88-3	0.0268	0.0206	mg/kg	06.06.19 17.07		1
Ethylbenzene	100-41-4	<0.0206	0.0206	mg/kg	06.06.19 17.07	U	1
m,p-Xylenes	179601-23-1	<0.0412	0.0412	mg/kg	06.06.19 17.07	U	1
o-Xylene	95-47-6	<0.0206	0.0206	mg/kg	06.06.19 17.07	U	1
Total Xylenes	1330-20-7	<0.0206	0.0206	mg/kg	06.06.19 17.07	U	1
Total BTEX		0.0268	0.0206	mg/kg	06.06.19 17.07		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 17.07		
a,a,a-Trifluorotoluene	98-08-8	92	%	71-121	06.06.19 17.07		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DC**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-108

Date Collected: 05.23.19 11.50

Sample Depth: 108 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.8	5.04	mg/kg	05.31.19 22.37		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.06.19 18.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.06.19 18.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.06.19 18.30	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.06.19 18.30	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.06.19 18.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.06.19 18.30	
o-Terphenyl	84-15-1	79	%	70-135	06.06.19 18.30	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DC**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-108

Date Collected: 05.23.19 11.50

Sample Depth: 108 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0207	0.0207	mg/kg	06.06.19 17.34	U	1
Toluene	108-88-3	0.0290	0.0207	mg/kg	06.06.19 17.34		1
Ethylbenzene	100-41-4	<0.0207	0.0207	mg/kg	06.06.19 17.34	U	1
m,p-Xylenes	179601-23-1	<0.0415	0.0415	mg/kg	06.06.19 17.34	U	1
o-Xylene	95-47-6	<0.0207	0.0207	mg/kg	06.06.19 17.34	U	1
Total Xylenes	1330-20-7	<0.0207	0.0207	mg/kg	06.06.19 17.34	U	1
Total BTEX		0.0290	0.0207	mg/kg	06.06.19 17.34		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 17.34		
a,a,a-Trifluorotoluene	98-08-8	99	%	71-121	06.06.19 17.34		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-109

Date Collected: 05.23.19 11.55

Sample Depth: 109 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.0	4.98	mg/kg	05.31.19 22.45		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.05.19 10.00

Basis: Wet Weight

Seq Number: 3091571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.06.19 18.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.06.19 18.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.06.19 18.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.06.19 18.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.06.19 18.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.06.19 18.55	
o-Terphenyl	84-15-1	77	%	70-135	06.06.19 18.55	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DD**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-109

Date Collected: 05.23.19 11.55

Sample Depth: 109 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 18.01	U	1
Toluene	108-88-3	0.0347	0.0204	mg/kg	06.06.19 18.01		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 18.01	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.06.19 18.01	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 18.01	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 18.01	U	1
Total BTEX		0.0347	0.0204	mg/kg	06.06.19 18.01		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	06.06.19 18.01		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	06.06.19 18.01		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-110

Date Collected: 05.23.19 12.00

Sample Depth: 110 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	5.00	mg/kg	05.31.19 23.06		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 11.00

Basis: Wet Weight

Seq Number: 3091214

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 21.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 21.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 21.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 21.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.02.19 21.59	
o-Terphenyl	84-15-1	96	%	70-135	06.02.19 21.59	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DE**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-110

Date Collected: 05.23.19 12.00

Sample Depth: 110 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 18.28	U	1
Toluene	108-88-3	0.0346	0.0204	mg/kg	06.06.19 18.28		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 18.28	U	1
m,p-Xylenes	179601-23-1	<0.0407	0.0407	mg/kg	06.06.19 18.28	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 18.28	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 18.28	U	1
Total BTEX		0.0346	0.0204	mg/kg	06.06.19 18.28		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	06.06.19 18.28		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	06.06.19 18.28		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DF**
Lab Sample Id: 625896-111

Matrix: Soil
Date Collected: 05.23.19 12.05

Date Received: 05.30.19 10.58
Sample Depth: 111 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 23.14	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091214

Date Prep: 06.02.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 22.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 22.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 22.57	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 22.57	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.02.19 22.57	
o-Terphenyl	84-15-1	93	%	70-135	06.02.19 22.57	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DF**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-111

Date Collected: 05.23.19 12.05

Sample Depth: 111 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.06.19 20.16	U	1
Toluene	108-88-3	0.0318	0.0199	mg/kg	06.06.19 20.16		1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.06.19 20.16	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.06.19 20.16	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.06.19 20.16	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.06.19 20.16	U	1
Total BTEX		0.0318	0.0199	mg/kg	06.06.19 20.16		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 20.16		
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	06.06.19 20.16		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-112

Date Collected: 05.23.19 12.10

Sample Depth: 112 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	60.6	5.00	mg/kg	05.31.19 23.21		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 11.00

Basis: Wet Weight

Seq Number: 3091214

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 23.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 23.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 23.16	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 23.16	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 23.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 23.16	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 23.16	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DG**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-112

Date Collected: 05.23.19 12.10

Sample Depth: 112 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0203	0.0203	mg/kg	06.06.19 20.43	U	1
Toluene	108-88-3	0.0305	0.0203	mg/kg	06.06.19 20.43		1
Ethylbenzene	100-41-4	<0.0203	0.0203	mg/kg	06.06.19 20.43	U	1
m,p-Xylenes	179601-23-1	<0.0407	0.0407	mg/kg	06.06.19 20.43	U	1
o-Xylene	95-47-6	<0.0203	0.0203	mg/kg	06.06.19 20.43	U	1
Total Xylenes	1330-20-7	<0.0203	0.0203	mg/kg	06.06.19 20.43	U	1
Total BTEX		0.0305	0.0203	mg/kg	06.06.19 20.43		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 20.43		
a,a,a-Trifluorotoluene	98-08-8	97	%	71-121	06.06.19 20.43		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-113

Date Collected: 05.23.19 12.15

Sample Depth: 113 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 05.31.19 16.00

Basis: Wet Weight

Seq Number: 3090852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	05.31.19 23.28	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ARM

% Moisture:

Analyst: ARM

Date Prep: 06.02.19 11.00

Basis: Wet Weight

Seq Number: 3091214

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 23.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.02.19 23.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 23.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.02.19 23.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.02.19 23.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	06.02.19 23.36	
o-Terphenyl	84-15-1	104	%	70-135	06.02.19 23.36	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DH**

Matrix: Soil

Date Received: 05.30.19 10.58

Lab Sample Id: 625896-113

Date Collected: 05.23.19 12.15

Sample Depth: 113 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: RNL

% Moisture:

Analyst: MIT

Date Prep: 06.05.19 15.30

Basis: Wet Weight

Seq Number: 3091494

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
Toluene	108-88-3	<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
m,p-Xylenes	179601-23-1	<0.0408	0.0408	mg/kg	06.06.19 21.09	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
Total BTEX		<0.0204	0.0204	mg/kg	06.06.19 21.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 21.09		
a,a,a-Trifluorotoluene	98-08-8	96	%	71-121	06.06.19 21.09		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DI**
Lab Sample Id: 625896-114

Matrix: Soil
Date Collected: 05.23.19 12.20

Date Received: 05.30.19 10.58
Sample Depth: 114 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	05.31.19 23.35	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091214

Date Prep: 06.02.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.02.19 23.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.02.19 23.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.02.19 23.55	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.02.19 23.55	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.02.19 23.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.02.19 23.55	
o-Terphenyl	84-15-1	90	%	70-135	06.02.19 23.55	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DI**
Lab Sample Id: 625896-114

Matrix: Soil
Date Collected: 05.23.19 12.20

Date Received: 05.30.19 10.58
Sample Depth: 114 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091494

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0202	0.0202	mg/kg	06.06.19 21.36	U	1
Toluene	108-88-3	0.0323	0.0202	mg/kg	06.06.19 21.36		1
Ethylbenzene	100-41-4	<0.0202	0.0202	mg/kg	06.06.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.0403	0.0403	mg/kg	06.06.19 21.36	U	1
o-Xylene	95-47-6	<0.0202	0.0202	mg/kg	06.06.19 21.36	U	1
Total Xylenes	1330-20-7	<0.0202	0.0202	mg/kg	06.06.19 21.36	U	1
Total BTEX		0.0323	0.0202	mg/kg	06.06.19 21.36		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	68-120	06.06.19 21.36		
a,a,a-Trifluorotoluene	98-08-8	98	%	71-121	06.06.19 21.36		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DJ**
Lab Sample Id: 625896-115

Matrix: Soil
Date Collected: 05.23.19 12.25

Date Received: 05.30.19 10.58
Sample Depth: 115 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	4.96	mg/kg	05.31.19 23.43		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091214

Date Prep: 06.02.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.03.19 00.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.03.19 00.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.03.19 00.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.03.19 00.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.03.19 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.03.19 00.15	
o-Terphenyl	84-15-1	91	%	70-135	06.03.19 00.15	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DJ**
Lab Sample Id: 625896-115

Matrix: Soil
Date Collected: 05.23.19 12.25

Date Received: 05.30.19 10.58
Sample Depth: 115 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091494

Prep Method: SW5030B

% Moisture:

Date Prep: 06.05.19 15.30

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0198	0.0198	mg/kg	06.06.19 22.03	U	1
Toluene	108-88-3	0.0437	0.0198	mg/kg	06.06.19 22.03		1
Ethylbenzene	100-41-4	<0.0198	0.0198	mg/kg	06.06.19 22.03	U	1
m,p-Xylenes	179601-23-1	<0.0397	0.0397	mg/kg	06.06.19 22.03	U	1
o-Xylene	95-47-6	<0.0198	0.0198	mg/kg	06.06.19 22.03	U	1
Total Xylenes	1330-20-7	<0.0198	0.0198	mg/kg	06.06.19 22.03	U	1
Total BTEX		0.0437	0.0198	mg/kg	06.06.19 22.03		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 22.03		
a,a,a-Trifluorotoluene	98-08-8	96	%	71-121	06.06.19 22.03		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DK**
Lab Sample Id: 625896-116

Matrix: Soil
Date Collected: 05.23.19 12.30

Date Received: 05.30.19 10.58
Sample Depth: 116 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090852

Date Prep: 05.31.19 16.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.49	4.98	mg/kg	05.31.19 23.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091214

Date Prep: 06.02.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.03.19 00.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.03.19 00.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	06.03.19 00.34	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.03.19 00.34	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	06.03.19 00.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	06.03.19 00.34	
o-Terphenyl	84-15-1	87	%	70-135	06.03.19 00.34	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DK**
Lab Sample Id: 625896-116

Matrix: Soil
Date Collected: 05.23.19 12.30

Date Received: 05.30.19 10.58
Sample Depth: 116 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091494

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0204	0.0204	mg/kg	06.06.19 22.30	U	1
Toluene	108-88-3	0.0367	0.0204	mg/kg	06.06.19 22.30		1
Ethylbenzene	100-41-4	<0.0204	0.0204	mg/kg	06.06.19 22.30	U	1
m,p-Xylenes	179601-23-1	<0.0407	0.0407	mg/kg	06.06.19 22.30	U	1
o-Xylene	95-47-6	<0.0204	0.0204	mg/kg	06.06.19 22.30	U	1
Total Xylenes	1330-20-7	<0.0204	0.0204	mg/kg	06.06.19 22.30	U	1
Total BTEX		0.0367	0.0204	mg/kg	06.06.19 22.30		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	68-120	06.06.19 22.30		
a,a,a-Trifluorotoluene	98-08-8	96	%	71-121	06.06.19 22.30		



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DL**
Lab Sample Id: 625896-117

Matrix: Soil
Date Collected: 05.23.19 12.35

Date Received: 05.30.19 10.58
Sample Depth: 117 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3090853

Date Prep: 05.31.19 16.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.50	5.00	mg/kg	06.01.19 00.34		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3091214

Date Prep: 06.02.19 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.03.19 00.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.03.19 00.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.03.19 00.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.03.19 00.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	06.03.19 00.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.03.19 00.54	
o-Terphenyl	84-15-1	88	%	70-135	06.03.19 00.54	



Certificate of Analytical Results 625896



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DL**
Lab Sample Id: 625896-117

Matrix: Soil
Date Collected: 05.23.19 12.35

Date Received: 05.30.19 10.58
Sample Depth: 117 ft

Analytical Method: BTEX by EPA 8021B

Tech: RNL

Analyst: MIT

Seq Number: 3091494

Date Prep: 06.05.19 15.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704219-19-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0199	0.0199	mg/kg	06.06.19 22.57	U	1
Toluene	108-88-3	0.0259	0.0199	mg/kg	06.06.19 22.57		1
Ethylbenzene	100-41-4	<0.0199	0.0199	mg/kg	06.06.19 22.57	U	1
m,p-Xylenes	179601-23-1	<0.0398	0.0398	mg/kg	06.06.19 22.57	U	1
o-Xylene	95-47-6	<0.0199	0.0199	mg/kg	06.06.19 22.57	U	1
Total Xylenes	1330-20-7	<0.0199	0.0199	mg/kg	06.06.19 22.57	U	1
Total BTEX		0.0259	0.0199	mg/kg	06.06.19 22.57		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	68-120	06.06.19 22.57		
a,a,a-Trifluorotoluene	98-08-8	95	%	71-121	06.06.19 22.57		

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

SQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090877

MB Sample Id: 7678891-1-BLK

Matrix: Solid

LCS Sample Id: 7678891-1-BKS

Prep Method: E300P

Date Prep: 05.30.19

LCSD Sample Id: 7678891-1-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	253	101	254	102	90-110	0	20	mg/kg	05.31.19 05:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3090743

MB Sample Id: 7678950-1-BLK

Matrix: Solid

LCS Sample Id: 7678950-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7678950-1-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	246	98	245	98	90-110	0	20	mg/kg	05.31.19 09:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3090835

MB Sample Id: 7678996-1-BLK

Matrix: Solid

LCS Sample Id: 7678996-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7678996-1-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	244	98	243	97	90-110	0	20	mg/kg	05.31.19 13:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3090836

MB Sample Id: 7678997-1-BLK

Matrix: Solid

LCS Sample Id: 7678997-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7678997-1-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	272	109	273	109	90-110	0	20	mg/kg	05.31.19 15:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3090839

MB Sample Id: 7678998-1-BLK

Matrix: Solid

LCS Sample Id: 7678998-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7678998-1-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	273	109	272	109	90-110	0	20	mg/kg	05.31.19 18:43	

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090852

MB Sample Id: 7679001-1-BLK

Matrix: Solid

LCS Sample Id: 7679001-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7679001-1-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	235	94	235	94	90-110	0	20	mg/kg	05.31.19 20:20	

Analytical Method: Chloride by EPA 300

Seq Number: 3090853

MB Sample Id: 7679003-1-BLK

Matrix: Solid

LCS Sample Id: 7679003-1-BKS

Prep Method: E300P

Date Prep: 05.31.19

LCSD Sample Id: 7679003-1-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	237	95	237	95	90-110	0	20	mg/kg	06.01.19 00:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3090877

Parent Sample Id: 625896-007

Matrix: Soil

MS Sample Id: 625896-007 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 625896-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	196	250	436	96	436	96	90-110	0	20	mg/kg	05.31.19 07:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3090877

Parent Sample Id: 626012-001

Matrix: Soil

MS Sample Id: 626012-001 S

Prep Method: E300P

Date Prep: 05.30.19

MSD Sample Id: 626012-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	390	253	625	93	626	93	90-110	0	20	mg/kg	05.31.19 05:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3090743

Parent Sample Id: 625896-017

Matrix: Soil

MS Sample Id: 625896-017 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	74.8	250	342	107	343	107	90-110	0	20	mg/kg	05.31.19 09:29	

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090743

Parent Sample Id: 625896-027

Matrix: Soil

MS Sample Id: 625896-027 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	42.9	252	331	114	299	102	90-110	10	20	mg/kg	05.31.19 10:41	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090835

Parent Sample Id: 625896-037

Matrix: Soil

MS Sample Id: 625896-037 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	35.0	248	334	121	301	107	90-110	10	20	mg/kg	05.31.19 13:19	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090835

Parent Sample Id: 625896-047

Matrix: Soil

MS Sample Id: 625896-047 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-047 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.7	252	307	117	284	108	90-110	8	20	mg/kg	05.31.19 14:31	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090836

Parent Sample Id: 625896-057

Matrix: Soil

MS Sample Id: 625896-057 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-057 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.9	249	331	122	302	110	90-110	9	20	mg/kg	05.31.19 16:09	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090836

Parent Sample Id: 625896-067

Matrix: Soil

MS Sample Id: 625896-067 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-067 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.9	251	317	121	292	111	90-110	8	20	mg/kg	05.31.19 17:21	X

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090839

Parent Sample Id: 625896-077

Matrix: Soil

MS Sample Id: 625896-077 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-077 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.48	250	302	117	288	111	90-110	5	20	mg/kg	05.31.19 18:59	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090839

Parent Sample Id: 625896-087

Matrix: Soil

MS Sample Id: 625896-087 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-087 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.90	250	288	114	283	112	90-110	2	20	mg/kg	05.31.19 20:11	X

Analytical Method: Chloride by EPA 300

Seq Number: 3090852

Parent Sample Id: 625896-097

Matrix: Soil

MS Sample Id: 625896-097 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-097 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.86	251	275	106	275	106	90-110	0	20	mg/kg	05.31.19 20:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3090852

Parent Sample Id: 625896-107

Matrix: Soil

MS Sample Id: 625896-107 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-107 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.74	250	260	101	261	102	90-110	0	20	mg/kg	05.31.19 22:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3090853

Parent Sample Id: 625896-117

Matrix: Soil

MS Sample Id: 625896-117 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625896-117 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.50	250	261	101	262	101	90-110	0	20	mg/kg	06.01.19 00:41	

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



LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3090853

Parent Sample Id: 625915-020

Matrix: Soil

MS Sample Id: 625915-020 S

Prep Method: E300P

Date Prep: 05.31.19

MSD Sample Id: 625915-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.05	250	266	104	267	104	90-110	0	20	mg/kg	06.01.19 02:22	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091213

MB Sample Id: 7679153-1-BLK

Matrix: Solid

LCS Sample Id: 7679153-1-BKS

Prep Method: TX1005P

Date Prep: 06.02.19

LCSD Sample Id: 7679153-1-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)	8.77	1000	1050	105	1050	105	70-135	0	20	mg/kg	06.02.19 12:31	
Diesel Range Organics (DRO)	12.3	1000	993	99	988	99	70-135	1	20	mg/kg	06.02.19 12:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		116		119		70-135	%	06.02.19 12:31
o-Terphenyl	97		96		115		70-135	%	06.02.19 12:31

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091214

MB Sample Id: 7679154-1-BLK

Matrix: Solid

LCS Sample Id: 7679154-1-BKS

Prep Method: TX1005P

Date Prep: 06.02.19

LCSD Sample Id: 7679154-1-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	1190	119	1060	106	70-135	12	20	mg/kg	06.02.19 21:20	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	999	100	70-135	17	20	mg/kg	06.02.19 21:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		129		122		70-135	%	06.02.19 21:20
o-Terphenyl	99		117		123		70-135	%	06.02.19 21:20

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091576

MB Sample Id: 7679449-1-BLK

Matrix: Solid

LCS Sample Id: 7679449-1-BKS

Prep Method: TX1005P

Date Prep: 06.04.19

LCSD Sample Id: 7679449-1-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	916	92	899	90	70-135	2	20	mg/kg	06.07.19 01:02	
Diesel Range Organics (DRO)	<8.13	1000	918	92	889	89	70-135	3	20	mg/kg	06.07.19 01:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		95		91		70-135	%	06.07.19 01:02
o-Terphenyl	93		98		97		70-135	%	06.07.19 01:02

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091698

MB Sample Id: 7679500-1-BLK

Matrix: Solid

LCS Sample Id: 7679500-1-BKS

Prep Method: TX1005P

Date Prep: 06.04.19

LCSD Sample Id: 7679500-1-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	1140	114	1140	114	70-135	0	20	mg/kg	06.07.19 08:21	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1100	110	70-135	1	20	mg/kg	06.07.19 08:21	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	81		128		128		70-135	%	06.07.19 08:21			
o-Terphenyl	80		120		115		70-135	%	06.07.19 08:21			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091699

MB Sample Id: 7679501-1-BLK

Matrix: Solid

LCS Sample Id: 7679501-1-BKS

Prep Method: TX1005P

Date Prep: 06.04.19

LCSD Sample Id: 7679501-1-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	1110	111	1130	113	70-135	2	20	mg/kg	06.07.19 17:51	
Diesel Range Organics (DRO)	<8.13	1000	1110	111	1130	113	70-135	2	20	mg/kg	06.07.19 17:51	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	81		127		130		70-135	%	06.07.19 17:51			
o-Terphenyl	80		121		119		70-135	%	06.07.19 17:51			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091357

MB Sample Id: 7679340-1-BLK

Matrix: Solid

LCS Sample Id: 7679340-1-BKS

Prep Method: TX1005P

Date Prep: 06.05.19

LCSD Sample Id: 7679340-1-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	1110	111	1120	112	70-135	1	20	mg/kg	06.05.19 11:16	
Diesel Range Organics (DRO)	<8.13	1000	1070	107	1070	107	70-135	0	20	mg/kg	06.05.19 11:16	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	93		118		120		70-135	%	06.05.19 11:16			
o-Terphenyl	94		106		102		70-135	%	06.05.19 11:16			

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

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

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091571

MB Sample Id: 7679448-1-BLK

Matrix: Solid

LCS Sample Id: 7679448-1-BKS

Prep Method: TX1005P

Date Prep: 06.05.19

LCSD Sample Id: 7679448-1-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	901	90	933	93	70-135	3	20	mg/kg	06.06.19 12:06	
Diesel Range Organics (DRO)	<8.13	1000	884	88	987	99	70-135	11	20	mg/kg	06.06.19 12:06	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	102		94		96		70-135	%	06.06.19 12:06			
o-Terphenyl	102		92		91		70-135	%	06.06.19 12:06			

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091213

Parent Sample Id: 625896-081

Matrix: Soil

MS Sample Id: 625896-081 S

Prep Method: TX1005P

Date Prep: 06.02.19

MSD Sample Id: 625896-081 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	1050	105	1010	101	70-135	4	20	mg/kg	06.02.19 13:31	
Diesel Range Organics (DRO)	9.64	997	1000	99	966	96	70-135	3	20	mg/kg	06.02.19 13:31	
Surrogate			MS %Rec	MS Flag		MSD %Rec	MSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane			121			112			70-135	%	06.02.19 13:31	
o-Terphenyl			119			106			70-135	%	06.02.19 13:31	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091214

Parent Sample Id: 625896-110

Matrix: Soil

MS Sample Id: 625896-110 S

Prep Method: TX1005P

Date Prep: 06.02.19

MSD Sample Id: 625896-110 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)	8.21	999	1080	107	1200	120	70-135	11	20	mg/kg	06.02.19 22:19	
Diesel Range Organics (DRO)	<8.12	999	1040	104	1200	120	70-135	14	20	mg/kg	06.02.19 22:19	
Surrogate				MS %Rec	MS Flag		MSD %Rec	MSD Flag	Limits	Units	Analysis Date	
1-Chlorooctane				120			127		70-135	%	06.02.19 22:19	
o-Terphenyl				109			116		70-135	%	06.02.19 22:19	

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

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

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091576

Parent Sample Id: 625896-001

Matrix: Soil

MS Sample Id: 625896-001 S

Prep Method: TX1005P

Date Prep: 06.04.19

MSD Sample Id: 625896-001 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)	13.5	999	816	80	788	78	70-135	3	20	mg/kg	06.07.19 02:16	
Diesel Range Organics (DRO)	<8.12	999	831	83	810	81	70-135	3	20	mg/kg	06.07.19 02:16	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			85		78		70-135			%	06.07.19 02:16	
o-Terphenyl			80		79		70-135			%	06.07.19 02:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091698

Parent Sample Id: 625896-021

Matrix: Soil

MS Sample Id: 625896-021 S

Prep Method: TX1005P

Date Prep: 06.04.19

MSD Sample Id: 625896-021 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)	<7.99	999	1010	101	1020	102	70-135	1	20	mg/kg	06.07.19 09:23	
Diesel Range Organics (DRO)	<8.12	999	963	96	987	99	70-135	2	20	mg/kg	06.07.19 09:23	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			128		123		70-135			%	06.07.19 09:23	
o-Terphenyl			105		110		70-135			%	06.07.19 09:23	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091699

Parent Sample Id: 625896-041

Matrix: Soil

MS Sample Id: 625896-041 S

Prep Method: TX1005P

Date Prep: 06.04.19

MSD Sample Id: 625896-041 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)	<7.99	999	976	98	987	99	70-135	1	20	mg/kg	06.07.19 18:54	
Diesel Range Organics (DRO)	<8.12	999	947	95	972	97	70-135	3	20	mg/kg	06.07.19 18:54	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits			Units	Analysis Date	
1-Chlorooctane			125		126		70-135			%	06.07.19 18:54	
o-Terphenyl			116		118		70-135			%	06.07.19 18:54	

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

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

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

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



QC Summary 625896

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091357

Parent Sample Id: 625896-061

Matrix: Soil

MS Sample Id: 625896-061 S

Prep Method: TX1005P

Date Prep: 06.05.19

MSD Sample Id: 625896-061 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)	12.8	998	1110	110	1130	112	70-135	2	20	mg/kg	06.05.19 12:16	
Diesel Range Organics (DRO)	<8.11	998	1090	109	1110	111	70-135	2	20	mg/kg	06.05.19 12:16	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		122		70-135	%	06.05.19 12:16
o-Terphenyl	101		98		70-135	%	06.05.19 12:16

Analytical Method: TPH by SW8015 Mod

Seq Number: 3091571

Parent Sample Id: 625896-101

Matrix: Soil

MS Sample Id: 625896-101 S

Prep Method: TX1005P

Date Prep: 06.05.19

MSD Sample Id: 625896-101 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)	10.6	998	872	86	944	94	70-135	8	20	mg/kg	06.06.19 15:09	
Diesel Range Organics (DRO)	8.35	998	913	91	975	97	70-135	7	20	mg/kg	06.06.19 15:09	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		94		70-135	%	06.06.19 15:09
o-Terphenyl	92		98		70-135	%	06.06.19 15:09

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

MB Sample Id: 7679256-1-BLK

Matrix: Solid

LCS Sample Id: 7679256-1-BKS

Prep Method: SW5030B

Date Prep: 06.04.19

LCSD Sample Id: 7679256-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.112	112	0.108	109	70-130	4	35	mg/kg	06.04.19 14:00	
Toluene	<0.00199	0.0996	0.101	101	0.0973	98	70-130	4	35	mg/kg	06.04.19 14:00	
Ethylbenzene	<0.00199	0.0996	0.106	106	0.102	103	70-130	4	35	mg/kg	06.04.19 14:00	
m,p-Xylenes	<0.00398	0.199	0.208	105	0.201	101	70-130	3	35	mg/kg	06.04.19 14:00	
o-Xylene	<0.00199	0.0996	0.102	102	0.0985	99	70-130	3	35	mg/kg	06.04.19 14:00	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		103		102		70-130	%	06.04.19 14:00
4-Bromofluorobenzene	98		94		95		70-130	%	06.04.19 14:00

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091369

MB Sample Id: 7679265-1-BLK

Matrix: Solid

LCS Sample Id: 7679265-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679265-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.100	100	0.0990	99	70-130	1	35	mg/kg	06.05.19 10:55	
Toluene	<0.00201	0.100	0.0988	99	0.0975	98	70-130	1	35	mg/kg	06.05.19 10:55	
Ethylbenzene	<0.00201	0.100	0.104	104	0.101	101	70-130	3	35	mg/kg	06.05.19 10:55	
m,p-Xylenes	<0.00402	0.201	0.207	103	0.203	102	70-130	2	35	mg/kg	06.05.19 10:55	
o-Xylene	<0.00201	0.100	0.102	102	0.100	100	70-130	2	35	mg/kg	06.05.19 10:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	115		99		100		70-130	%	06.05.19 10:55
4-Bromofluorobenzene	100		98		98		70-130	%	06.05.19 10:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091466

MB Sample Id: 7679381-1-BLK

Matrix: Solid

LCS Sample Id: 7679381-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679381-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.82	91	2.07	104	55-120	13	20	mg/kg	06.05.19 13:28	
Toluene	<0.0200	2.00	2.03	102	2.04	102	77-120	0	20	mg/kg	06.05.19 13:28	
Ethylbenzene	<0.0200	2.00	2.12	106	2.08	104	77-120	2	20	mg/kg	06.05.19 13:28	
m,p-Xylenes	<0.0400	4.00	4.38	110	4.16	104	78-120	5	20	mg/kg	06.05.19 13:28	
o-Xylene	<0.0200	2.00	2.23	112	2.11	106	78-120	6	20	mg/kg	06.05.19 13:28	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	112		103		106		68-120	%	06.05.19 13:28
a,a,a-Trifluorotoluene	110		106		106		71-121	%	06.05.19 13:28

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091375

MB Sample Id: 7679290-1-BLK

Matrix: Solid

LCS Sample Id: 7679290-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679290-1-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	0.0973	97	0.105	105	70-130	8	35	mg/kg	06.05.19 20:25	
Toluene	<0.000456	0.100	0.0950	95	0.102	102	70-130	7	35	mg/kg	06.05.19 20:25	
Ethylbenzene	<0.000565	0.100	0.105	105	0.111	111	70-130	6	35	mg/kg	06.05.19 20:25	
m,p-Xylenes	<0.00101	0.200	0.212	106	0.227	114	70-130	7	35	mg/kg	06.05.19 20:25	
o-Xylene	<0.000344	0.100	0.103	103	0.112	112	70-130	8	35	mg/kg	06.05.19 20:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		98		103		70-130	%	06.05.19 20:25
4-Bromofluorobenzene	84		96		105		70-130	%	06.05.19 20:25

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091376

MB Sample Id: 7679292-1-BLK

Matrix: Solid

LCS Sample Id: 7679292-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679292-1-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	0.0935	94	0.0958	97	70-130	2	35	mg/kg	06.05.19 20:39	
Toluene	<0.00200	0.100	0.0974	97	0.0965	97	70-130	1	35	mg/kg	06.05.19 20:39	
Ethylbenzene	<0.00200	0.100	0.102	102	0.100	101	70-130	2	35	mg/kg	06.05.19 20:39	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.204	103	70-130	2	35	mg/kg	06.05.19 20:39	
o-Xylene	<0.00200	0.100	0.104	104	0.102	103	70-130	2	35	mg/kg	06.05.19 20:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		98		99		70-130	%	06.05.19 20:39
4-Bromofluorobenzene	103		101		101		70-130	%	06.05.19 20:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091480

MB Sample Id: 7679393-1-BLK

Matrix: Solid

LCS Sample Id: 7679393-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679393-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	2.00	100	2.02	101	55-120	1	20	mg/kg	06.06.19 05:17	
Toluene	<0.0200	2.00	1.98	99	1.99	100	77-120	1	20	mg/kg	06.06.19 05:17	
Ethylbenzene	<0.0200	2.00	2.11	106	2.10	105	77-120	0	20	mg/kg	06.06.19 05:17	
m,p-Xylenes	<0.0400	4.00	4.25	106	4.23	106	78-120	0	20	mg/kg	06.06.19 05:17	
o-Xylene	<0.0200	2.00	2.11	106	2.11	106	78-120	0	20	mg/kg	06.06.19 05:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	108		105		102		68-120	%	06.06.19 05:17
a,a,a-Trifluorotoluene	103		105		103		71-121	%	06.06.19 05:17

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091490

MB Sample Id: 7679397-1-BLK

Matrix: Solid

LCS Sample Id: 7679397-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679397-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.88	94	1.84	92	55-120	2	20	mg/kg	06.05.19 18:43	
Toluene	<0.0200	2.00	1.98	99	1.94	97	77-120	2	20	mg/kg	06.05.19 18:43	
Ethylbenzene	<0.0200	2.00	2.03	102	2.02	101	77-120	0	20	mg/kg	06.05.19 18:43	
m,p-Xylenes	<0.0400	4.00	4.07	102	4.03	101	78-120	1	20	mg/kg	06.05.19 18:43	
o-Xylene	<0.0200	2.00	2.01	101	1.99	100	78-120	1	20	mg/kg	06.05.19 18:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	96		97		94		68-120	%	06.05.19 18:43
a,a,a-Trifluorotoluene	100		95		96		71-121	%	06.05.19 18:43

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

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

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091494

MB Sample Id: 7679400-1-BLK

Matrix: Solid

LCS Sample Id: 7679400-1-BKS

Prep Method: SW5030B

Date Prep: 06.05.19

LCSD Sample Id: 7679400-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.78	89	1.88	94	55-120	5	20	mg/kg	06.06.19 10:00	
Toluene	<0.0200	2.00	1.89	95	1.89	95	77-120	0	20	mg/kg	06.06.19 10:00	
Ethylbenzene	<0.0200	2.00	1.93	97	1.95	98	77-120	1	20	mg/kg	06.06.19 10:00	
m,p-Xylenes	<0.0400	4.00	3.85	96	3.91	98	78-120	2	20	mg/kg	06.06.19 10:00	
o-Xylene	<0.0200	2.00	1.91	96	1.94	97	78-120	2	20	mg/kg	06.06.19 10:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	89		89		89		68-120	%	06.06.19 10:00
a,a,a-Trifluorotoluene	95		93		92		71-121	%	06.06.19 10:00

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091245

Parent Sample Id: 625896-001

Matrix: Soil

MS Sample Id: 625896-001 S

Prep Method: SW5030B

Date Prep: 06.04.19

MSD Sample Id: 625896-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0857	86	0.0757	76	70-130	12	35	mg/kg	06.04.19 14:38	
Toluene	<0.00200	0.0998	0.0778	78	0.0699	70	70-130	11	35	mg/kg	06.04.19 14:38	
Ethylbenzene	<0.00200	0.0998	0.0812	81	0.0712	72	70-130	13	35	mg/kg	06.04.19 14:38	
m,p-Xylenes	<0.00399	0.200	0.161	81	0.142	72	70-130	13	35	mg/kg	06.04.19 14:38	
o-Xylene	<0.00200	0.0998	0.0789	79	0.0695	70	70-130	13	35	mg/kg	06.04.19 14:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	06.04.19 14:38
4-Bromofluorobenzene	97		99		70-130	%	06.04.19 14:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091369

Parent Sample Id: 625896-021

Matrix: Soil

MS Sample Id: 625896-021 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 625896-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0730	72	0.0902	91	70-130	21	35	mg/kg	06.05.19 11:33	
Toluene	<0.00202	0.101	0.0718	71	0.0881	89	70-130	20	35	mg/kg	06.05.19 11:33	
Ethylbenzene	<0.00202	0.101	0.0741	73	0.0915	92	70-130	21	35	mg/kg	06.05.19 11:33	
m,p-Xylenes	<0.00403	0.202	0.149	74	0.183	92	70-130	20	35	mg/kg	06.05.19 11:33	
o-Xylene	<0.00202	0.101	0.0735	73	0.0905	91	70-130	21	35	mg/kg	06.05.19 11:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		70-130	%	06.05.19 11:33
4-Bromofluorobenzene	101		100		70-130	%	06.05.19 11:33

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

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

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091466

Parent Sample Id: 625896-061

Matrix: Soil

MS Sample Id: 625896-061 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 625896-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.84	92	1.70	85	54-120	8	25	mg/kg	06.05.19 18:01	
Toluene	<0.0200	2.00	2.03	102	1.87	94	57-120	8	25	mg/kg	06.05.19 18:01	
Ethylbenzene	<0.0200	2.00	2.09	105	1.96	98	58-131	6	25	mg/kg	06.05.19 18:01	
m,p-Xylenes	<0.0400	4.00	4.17	104	3.92	98	62-124	6	25	mg/kg	06.05.19 18:01	
o-Xylene	<0.0200	2.00	2.07	104	1.97	99	62-124	5	25	mg/kg	06.05.19 18:01	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	100		90		68-120	%	06.05.19 18:01
a,a,a-Trifluorotoluene	113		109		71-121	%	06.05.19 18:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091375

Parent Sample Id: 626506-001

Matrix: Soil

MS Sample Id: 626506-001 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 626506-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.0931	93	0.0749	75	70-130	22	35	mg/kg	06.05.19 21:03	
Toluene	<0.000457	0.100	0.0906	91	0.0688	69	70-130	27	35	mg/kg	06.05.19 21:03	X
Ethylbenzene	<0.000566	0.100	0.0966	97	0.0677	68	70-130	35	35	mg/kg	06.05.19 21:03	X
m,p-Xylenes	<0.00102	0.200	0.196	98	0.135	68	70-130	37	35	mg/kg	06.05.19 21:03	XF
o-Xylene	0.000454	0.100	0.0962	96	0.0678	68	70-130	35	35	mg/kg	06.05.19 21:03	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	06.05.19 21:03
4-Bromofluorobenzene	106		104		70-130	%	06.05.19 21:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091376

Parent Sample Id: 625896-041

Matrix: Soil

MS Sample Id: 625896-041 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 625896-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0907	90	0.0874	88	70-130	4	35	mg/kg	06.05.19 21:17	
Toluene	<0.00201	0.101	0.0922	91	0.0891	90	70-130	3	35	mg/kg	06.05.19 21:17	
Ethylbenzene	<0.00201	0.101	0.0955	95	0.0920	93	70-130	4	35	mg/kg	06.05.19 21:17	
m,p-Xylenes	<0.00402	0.201	0.195	97	0.188	95	70-130	4	35	mg/kg	06.05.19 21:17	
o-Xylene	<0.00201	0.101	0.0971	96	0.0933	94	70-130	4	35	mg/kg	06.05.19 21:17	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	06.05.19 21:17
4-Bromofluorobenzene	102		102		70-130	%	06.05.19 21:17

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

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

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 625896

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091480

Parent Sample Id: 625896-081

Matrix: Soil

MS Sample Id: 625896-081 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 625896-081 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0395	3.95	3.82	97	3.35	88	54-120	13	25	mg/kg	06.06.19 07:41	
Toluene	0.0432	3.95	3.98	100	3.77	98	57-120	5	25	mg/kg	06.06.19 07:41	
Ethylbenzene	<0.0395	3.95	4.04	102	3.96	104	58-131	2	25	mg/kg	06.06.19 07:41	
m,p-Xylenes	<0.0791	7.91	8.06	102	7.94	104	62-124	2	25	mg/kg	06.06.19 07:41	
o-Xylene	<0.0395	3.95	3.95	100	3.97	104	62-124	1	25	mg/kg	06.06.19 07:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		101		68-120	%	06.06.19 07:41
a,a,a-Trifluorotoluene	110		112		71-121	%	06.06.19 07:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091490

Parent Sample Id: 625896-101

Matrix: Soil

MS Sample Id: 625896-101 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 625896-101 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0200	2.00	1.89	95	1.70	85	54-120	11	25	mg/kg	06.05.19 21:25	
Toluene	<0.0200	2.00	2.04	102	1.86	93	57-120	9	25	mg/kg	06.05.19 21:25	
Ethylbenzene	<0.0200	2.00	2.17	109	2.01	101	58-131	8	25	mg/kg	06.05.19 21:25	
m,p-Xylenes	<0.0400	4.00	4.38	110	4.04	101	62-124	8	25	mg/kg	06.05.19 21:25	
o-Xylene	<0.0200	2.00	2.17	109	1.98	99	62-124	9	25	mg/kg	06.05.19 21:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	99		97		68-120	%	06.05.19 21:25
a,a,a-Trifluorotoluene	96		97		71-121	%	06.05.19 21:25

Analytical Method: BTEX by EPA 8021B

Seq Number: 3091494

Parent Sample Id: 626215-001

Matrix: Soil

MS Sample Id: 626215-001 S

Prep Method: SW5030B

Date Prep: 06.05.19

MSD Sample Id: 626215-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.110	1.88	1.51	74	1.35	73	54-120	11	25	mg/kg	06.06.19 12:41	
Toluene	1.43	1.88	4.58	168	4.09	156	57-120	11	25	mg/kg	06.06.19 12:41	X
Ethylbenzene	1.36	1.88	4.69	177	4.40	179	58-131	6	25	mg/kg	06.06.19 12:41	X
m,p-Xylenes	3.89	3.75	12.0	216	11.3	218	62-124	6	25	mg/kg	06.06.19 12:41	X
o-Xylene	1.38	1.88	5.14	200	4.78	200	62-124	7	25	mg/kg	06.06.19 12:41	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	124	**	139	**	68-120	%	06.06.19 12:41
a,a,a-Trifluorotoluene	74		72		71-121	%	06.06.19 12:41

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

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

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

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



Chain of Custody

Work Order No: 1028894

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 Littell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	lbellell@lteny.com
Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☐ No ☒
	Temperature (°C):	0.510.3	Thermometer ID:	28
	Received Inact:	Yes ☒ No ☐	Correction Factor:	-0.2
	Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
	Sample Custody Seals:	Yes ☒ No ☐ N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																Work Order Notes
					Number of Containers																
					TPH (EPA 8015)																
					BTEX (EPA 0=8021)																
					Chloride (EPA 300.0)																
MMW01	S	5/22/2019	1555	1'	1	X	X	X													
MMW01A	S	5/22/2019	1600	2'	1	X	X	X													
MMW01B	S	5/22/2019	1605	3'	1	X	X	X													
MMW01C	S	5/22/2019	1610	4'	1	X	X	X													
MMW01D	S	5/22/2019	1615	5'	1	X	X	X													
MMW01E	S	5/22/2019	1620	6'	1	X	X	X													
MMW01F	S	5/22/2019	1625	7'	1	X	X	X													
MMW01G	S	5/22/2019	1630	8'	1	X	X	X													
MMW01H	S	5/22/2019	1635	9'	1	X	X	X													
MMW01I	S	5/22/2019	1640	10'	1	X	X	X													

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. [Signature]	[Signature]	5/24/19 08:40	2. [Signature]	[Signature]	5/24/19 15:38
3. [Signature]	[Signature]		4. [Signature]	[Signature]	
5. [Signature]	[Signature]		6. [Signature]	[Signature]	

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) 704-4000

Hobbs, NM (575-392-7550) Phoenix AZ (480 355 0000) Allentown PA (770 440 0000) =

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Page

2/2

HODDS, NIM (315-392-7550)				Phoenix, AZ (480-355-0900)		Atlanta, GA (770-449-8800)		Tampa, FL (8	
Project Manager:	Dan Moir			Bill to: (if different)	Kyle Littrell				
Company Name:	LT Environmental, Inc., Permian office			Company Name:	XTO Energy				
Address:	3300 North A Street			Address:	3104 E Green Street				
City, State ZIP:	Midland, TX 79705			City, State ZIP:	Carlsbad, NM 88220				
Phone:	432.236.3849			Email:	bbelliii@ltenv.com				

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐

State of Project:

Reporting: Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐

Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	JRU 10	Turn Around						ANALYSIS REQUEST	Work Order Notes
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X						
P.O. Number:		Rush:							
Sampler's Name:	Benjamin Beill	Due Date:							
SAMPLE RECEIPT		Temp Blank:	Yes ☒ No	Wet Ice:	Yes ☒ No				
Temperature (°C):	0510.3	Thermometer:							
Received Intact:	Yes ☒ No								
Cooler Custody Seals:	Yes ☒ No	Correction Factor:	-0.2						
Sample Custody Seals:	Yes ☒ No	Total Containers:							
of Containers									
(A 8015)									
(PA 0=8021)									
(EPA 300.0)									
								TAT starts the day received by the	

[illegible]

Total 200.7 / 6010 200.8 / 6020:

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

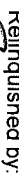
	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn
8RCRA	13PPM																											
TCLP / SPLP	60/10	8RCRA	Sh	Ae	Ba	Be	Cd	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn	

10

[illegible]

1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/29/19 08:40			5/30/19
					1058



Chain of Custody

Work Order No:

1615894

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

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Page 3 of 12

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	☒ X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Bellill	Due Date:	

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	☒ X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Bellill	Due Date:	

Temp Blank:	Yes ☒ No	Wet Ice:	☒ Yes No
Temperature (°C):	0.5°C	Thermometer ID:	12
Received Intact:	Yes ☒ No	Correction Factor:	-0.8
Cooler Custody Seals:	Yes ☒ No	Total Containers:	
Sample Custody Seals:	Yes ☒ No		

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST															Sample Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
										TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	<i>[Signature]</i>	5/24/19 08:40		<i>[Signature]</i>	5/24/19 10:59
3					
5					



Chain of Custody

Work Order No:

105894

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

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Page 4 of 12

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

Project Name:	JRU 10	Turn Around	X
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Benjamin Bellill		

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

Project Name:	JRU 10	Turn Around	X
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Rush:	
P.O. Number:		Due Date:	
Sampler's Name:	Benjamin Bellill		

Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	65.0	Thermometer ID:	12
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.5
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
Sample Custody Seals:	Yes ☒ No ☐ N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
MW01AD	S	5/22/2019	1742	31'	1	X	X	X		
MW01AE	S	5/22/2019	1743	32'	1	X	X	X		
MW01AF	S	5/22/2019	1744	33'	1	X	X	X		
MW01AG	S	5/22/2019	1745	34'	1	X	X	X		
MW01AH	S	5/22/2019	1750	35'	1	X	X	X		
MW01AI	S	5/22/2019	1755	36'	1	X	X	X		
MW01AJ	S	5/22/2019	1800	37'	1	X	X	X		
MW01AK	S	5/22/2019	1805	38'	1	X	X	X		
MW01AL	S	5/22/2019	1810	39'	1	X	X	X		
MW01AM	S	5/22/2019	1812	40'	1	X	X	X		

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1. <i>[Signature]</i>	<i>[Signature]</i>	5/23/19 08:40	2. <i>[Signature]</i>	<i>[Signature]</i>	5/30/19
3. <i>[Signature]</i>			4. <i>[Signature]</i>		1059
5.			6.		



Chain of Custody

Work Order No:

105894

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

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Page 5 of 12

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

Temp Blank:	Yes	Wet Ice:	Yes	No
Temperature (°C):	050.3	Thermometer ID:	12	
Received Intact:	Yes	No		
Cooler Custody Seals:	Yes	No	N/A	
Sample Custody Seals:	Yes	No	N/A	
Correction Factor:				
Total Containers:				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
MW01AN	S	5/22/2019	1815	41'	1	X	X	X		
MW01AO	S	5/23/2019	0645	42'	1	X	X	X		
MW01AP	S	5/23/2019	0650	43'	1	X	X	X		
MW01AQ	S	5/23/2019	0655	44'	1	X	X	X		
MW01AR	S	5/23/2019	0700	45'	1	X	X	X		
MW01AS	S	5/23/2019	0710	46'	1	X	X	X		
MW01AT	S	5/23/2019	0720	47'	1	X	X	X		
MW01AU	S	5/23/2019	0730	48'	1	X	X	X		
MW01AV	S	5/23/2019	0735	49'	1	X	X	X		
MW01AW	S	5/23/2019	0740	50'	1	X	X	X		

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <u>[Signature]</u>	2 <u>[Signature]</u>	5/23/2019	3 <u>[Signature]</u>	4 <u>[Signature]</u>	5/30/19
5					1058



Chain of Custody

Work Order No:

1058914

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

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Page 6 of 12

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0.56.3	Thermometer ID:	22
Received Intact:	Yes ☒ No ☐	Correction Factor:	0.1
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
Sample Custody Seals:	Yes ☒ No ☐ N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	ANALYSIS REQUEST	Work Order Notes
MMW01AX	S	5/23/2019	0750	51'	1	X	X	X		
MMW01AY	S	5/23/2019	0800	52'	1	X	X	X		
MMW01AZ	S	5/23/2019	0810	53'	1	X	X	X		
MMW01BA	S	5/23/2019	0815	54'	1	X	X	X		
MMW01BB	S	5/23/2019	0820	55'	1	X	X	X		
MMW01BC	S	5/23/2019	0822	56'	1	X	X	X		
MMW01BD	S	5/23/2019	0825	57'	1	X	X	X		
MMW01BE	S	5/23/2019	0830	58'	1	X	X	X		
MMW01BF	S	5/23/2019	0832	59'	1	X	X	X		
MMW01BG	S	5/23/2019	0835	60'	1	X	X	X		

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	2	5/23/19 08:40	3	4	5/30/19 10:59
5			6		



Chain of Custody

Work Order No:

10258940

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

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Page 7 of 12

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

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

Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	
SAMPLE RECEIPT			
Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0.5/6.3	Thermometer ID:	172
Received Intact:	Yes ☒ No ☐	Correction Factor:	
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:	
Sample Custody Seals:	Yes ☒ No ☐ N/A		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST													Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)										
MW01BH	S	5/23/2019	0840	61'	1	X	X	X										
MW01BI	S	5/23/2019	0845	62'	1	X	X	X										
MW01BJ	S	5/23/2019	0848	63'	1	X	X	X										
MW01BK	S	5/23/2019	0850	64'	1	X	X	X										
MW01BL	S	5/23/2019	0855	65'	1	X	X	X										
MW01BM	S	5/23/2019	0858	66'	1	X	X	X										
MW01BN	S	5/23/2019	0900	67'	1	X	X	X										
MW01BO	S	5/23/2019	0905	68'	1	X	X	X										
MW01BP	S	5/23/2019	0915	69'	1	X	X	X										
MW01BQ	S	5/23/2019	0920	70'	1	X	X	X										

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

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/24/2019 08:40			5/26/19 1059

Chain of Custody

Work Order No: 172910

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) 704-4206

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta GA (770-449-8800) Tampa FL (813-620-2000)

Page 12 of 28
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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	lbellell@ltenv.com

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

Project Name:		JRU 10		Turn Around		ANALYSIS REQUEST										Work Order Notes			
Project Number:		2RP-3179, 2RP-3464, 2RP-5243		Routine														X	
P.O. Number:				Rush:															
Sampler's Name:		Benjamin Beill		Due Date:															
SAMPLE RECEIPT		Temp Blank:		Yes														No	
Temperature (°C):		0.5105		Thermometer ID:		128													
Received Intact:		Yes		No															
Cooler Custody Seals:		Yes		No		Correction Factor:													
Sample Custody Seals:		Yes		No		Total Containers:													
of Containers A 8015) PA 0=8021) (EPA 300.0)								TAT starts the day received by the lab if received by 4:30pm											

[illegible]

Total	200.7 / 6010	200.8 / 6020:	Circle Method(s) and Metal(s) to be analyzed
8RCRA	13PPM	Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
TCLP / SPLP	6010:	8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
			1631 / 245.1 / 7470 / 7471 : H ₂

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/29/98 0842			5/31/98
					1058



Chain of Custody

Work Order No:

1025894

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 9 of 12

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	lbellell@xenv.com
Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☒	Wet Ice:	Yes ☒ No ☒
Temperature (°C):	0510.5	Thermometer ID:			
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:			
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers															
MW01CB	S	5/23/2019	1015	81'	1	X	X	X	X											
MW01CC	S	5/23/2019	1017	82'	1	X	X	X	X											
MW01CD	S	5/23/2019	1020	83'	1	X	X	X	X											
MW01CE	S	5/23/2019	1025	84'	1	X	X	X	X											
MW01CF	S	5/23/2019	1027	85'	1	X	X	X	X											
MW01CG	S	5/23/2019	1030	86'	1	X	X	X	X											
MW01CH	S	5/23/2019	1032	87'	1	X	X	X	X											
MW01CI	S	5/23/2019	1034	88'	1	X	X	X	X											
MW01CJ	S	5/23/2019	1036	89'	1	X	X	X	X											
MW01CK	S	5/23/2019	1038	90'	1	X	X	X	X											

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed	TCICP / SPLP 6010: 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	1634 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/29/2019 10:20			5/30/19 10:58



Work Order No:

U.S. Govt

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page _____ of _____

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐ State of Project: Reporting: Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:		JRU 10		Turn Around		ANALYSIS REQUEST	Work Order Notes	
Project Number:		2RP-3179, 2RP-3464, 2RP-5243		Routine				X
P.O. Number:				Rush:				
Sampler's Name:		Benjamin Beill		Due Date:				
SAMPLE RECEIPT		Temp Blank:		Yes	(No)			Wet Ice:
Temperature (°C):		0.5 / 0.5		Thermometer		JB		
Received Intact:		(Yes) No						
Cooler Custody Seals:		Yes (No) N/A		Correction Factor:				
Sample Custody Seals:		Yes (No) N/A		Total Containers:				
Number of Containers								
A 8015)								
PA 0=8021)								
(EPA 300.0)								
TAT starts the day received by the lab. if received by 4:30pm								

[illegible]

Total 200.7 / 6010	200.8 / 6020:	
8RCRA	13PPM	Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
TCLP / SPLP 6010:	8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
		1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		5/25/19 08:40	2 		5/30/19
3 			4 		10:58
5 			6 		



Chain of Custody

Work Order No: 102894

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)565-3443 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 11 of 12

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Litrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432.236.3849	Email:	jbellili@ltenv.com
Project Name:	JRU 10	Turn Around	
Project Number:	2RP-3179, 2RP-3464, 2RP-5243	Route	X
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Belli	Due Date:	

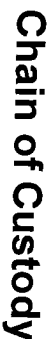
SAMPLE RECEIPT		Temp Blank:	Yes ☒ No ☐	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0510.3	Thermometer ID	28		
Received intact:	Yes ☒ No ☐	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☐ N/A	Total Containers:			
Sample Custody Seals:	Yes ☒ No ☐ N/A				

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST										Work Order Notes
					Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)							
MW01CV	S	5/23/2019	1112	101'	1	X	X	X							
MW01CW	S	5/23/2019	1115	102'	1	X	X	X							
MW01CX	S	5/23/2019	1122	103'	1	X	X	X							
MW01CY	S	5/23/2019	1125	104'	1	X	X	X							
MW01CZ	S	5/23/2019	1130	105'	1	X	X	X							
MW01DA	S	5/23/2019	1140	106'	1	X	X	X							
MW01DB	S	5/23/2019	1145	107'	1	X	X	X							
MW01DC	S	5/23/2019	1150	108'	1	X	X	X							
MW01DD	S	5/23/2019	1155	109'	1	X	X	X							
MW01DE	S	5/23/2019	1200	110'	1	X	X	X							

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/24/19 08:20			5/30/19 10:50



02894

Page 11 of 12

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐	
State of Project:	
Reporting Level: I ☐ Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

ST					Work Order Notes
					TAT starts the day received by the

[illegible]

Se Ag Ti U
Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
1631 / 2451 / 7470 / 7474 · 45

standard terms and conditions of sale, and circumstances beyond the control of the Seller, and not previously negotiated.

Received by: (Signature)		Date/Time
Bax		5/30/19
		058



Inter-Office Shipment

Page 1 of 4

IOS Number **40656**

Date/Time: 06/05/19 10:34

Created by: Jessica Kramer

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: 775400466003

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625896-042	S	MW01AO	05/23/19 06:45	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 06:45	JKR	BR4FBZ BZ BZME EBZ X	
625896-043	S	MW01AP	05/23/19 06:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 06:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-044	S	MW01AQ	05/23/19 06:55	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 06:55	JKR	BR4FBZ BZ BZME EBZ X	
625896-045	S	MW01AR	05/23/19 07:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-046	S	MW01AS	05/23/19 07:10	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:10	JKR	BR4FBZ BZ BZME EBZ X	
625896-047	S	MW01AT	05/23/19 07:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-048	S	MW01AU	05/23/19 07:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:30	JKR	BR4FBZ BZ BZME EBZ X	
625896-049	S	MW01AV	05/23/19 07:35	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:35	JKR	BR4FBZ BZ BZME EBZ X	
625896-050	S	MW01AW	05/23/19 07:40	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:40	JKR	BR4FBZ BZ BZME EBZ X	
625896-051	S	MW01AX	05/23/19 07:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 07:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-052	S	MW01AY	05/23/19 08:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-053	S	MW01AZ	05/23/19 08:10	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:10	JKR	BR4FBZ BZ BZME EBZ X	
625896-054	S	MW01BA	05/23/19 08:15	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:15	JKR	BR4FBZ BZ BZME EBZ X	
625896-055	S	MW01BB	05/23/19 08:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-056	S	MW01BC	05/23/19 08:22	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:22	JKR	BR4FBZ BZ BZME EBZ X	
625896-057	S	MW01BD	05/23/19 08:25	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:25	JKR	BR4FBZ BZ BZME EBZ X	
625896-058	S	MW01BE	05/23/19 08:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:30	JKR	BR4FBZ BZ BZME EBZ X	
625896-059	S	MW01BF	05/23/19 08:32	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:32	JKR	BR4FBZ BZ BZME EBZ X	
625896-060	S	MW01BG	05/23/19 08:35	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:35	JKR	BR4FBZ BZ BZME EBZ X	
625896-061	S	MW01BH	05/23/19 08:40	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:40	JKR	BR4FBZ BZ BZME EBZ X	
625896-062	S	MW01BI	05/23/19 08:45	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:45	JKR	BR4FBZ BZ BZME EBZ X	
625896-063	S	MW01BJ	05/23/19 08:48	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:48	JKR	BR4FBZ BZ BZME EBZ X	
625896-064	S	MW01BK	05/23/19 08:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-065	S	MW01BL	05/23/19 08:55	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:55	JKR	BR4FBZ BZ BZME EBZ X	
625896-066	S	MW01BM	05/23/19 08:58	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 08:58	JKR	BR4FBZ BZ BZME EBZ X	



Inter-Office Shipment

Page 2 of 4

IOS Number **40656**

Date/Time: 06/05/19 10:34

Created by: Jessica Kramer

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: 775400466003

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625896-067	S	MW01BN	05/23/19 09:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-068	S	MW01BO	05/23/19 09:05	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:05	JKR	BR4FBZ BZ BZME EBZ X	
625896-069	S	MW01BP	05/23/19 09:15	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:15	JKR	BR4FBZ BZ BZME EBZ X	
625896-070	S	MW01BQ	05/23/19 09:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-071	S	MW01BR	05/23/19 09:25	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:25	JKR	BR4FBZ BZ BZME EBZ X	
625896-072	S	MW01BS	05/23/19 09:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:30	JKR	BR4FBZ BZ BZME EBZ X	
625896-073	S	MW01BT	05/23/19 09:35	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:35	JKR	BR4FBZ BZ BZME EBZ X	
625896-074	S	MW01BU	05/23/19 09:40	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:40	JKR	BR4FBZ BZ BZME EBZ X	
625896-075	S	MW01BV	05/23/19 09:45	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:45	JKR	BR4FBZ BZ BZME EBZ X	
625896-076	S	MW01BW	05/23/19 09:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-077	S	MW01BX	05/23/19 09:55	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 09:55	JKR	BR4FBZ BZ BZME EBZ X	
625896-078	S	MW01BY	05/23/19 10:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-079	S	MW01BZ	05/23/19 10:05	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:05	JKR	BR4FBZ BZ BZME EBZ X	
625896-080	S	MW01CA	05/23/19 10:10	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:10	JKR	BR4FBZ BZ BZME EBZ X	
625896-081	S	MW01CB	05/23/19 10:15	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:15	JKR	BR4FBZ BZ BZME EBZ X	
625896-082	S	MW01CC	05/23/19 10:17	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:17	JKR	BR4FBZ BZ BZME EBZ X	
625896-083	S	MW01CD	05/23/19 10:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-084	S	MW01CE	05/23/19 10:25	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:25	JKR	BR4FBZ BZ BZME EBZ X	
625896-085	S	MW01CF	05/23/19 10:28	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:28	JKR	BR4FBZ BZ BZME EBZ X	
625896-086	S	MW01CG	05/23/19 10:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:30	JKR	BR4FBZ BZ BZME EBZ X	
625896-087	S	MW01CH	05/23/19 10:32	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:32	JKR	BR4FBZ BZ BZME EBZ X	
625896-088	S	MW01CI	05/23/19 10:34	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:34	JKR	BR4FBZ BZ BZME EBZ X	
625896-089	S	MW01CJ	05/23/19 10:36	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:36	JKR	BR4FBZ BZ BZME EBZ X	
625896-090	S	MW01CK	05/23/19 10:38	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:38	JKR	BR4FBZ BZ BZME EBZ X	
625896-091	S	MW01CL	05/23/19 10:40	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:40	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 3 of 4

IOS Number **40656**

Date/Time: 06/05/19 10:34

Created by: Jessica Kramer

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: 775400466003

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625896-092	S	MW01CM	05/23/19 10:42	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:42	JKR	BR4FBZ BZ BZME EBZ X	
625896-093	S	MW01CN	05/23/19 10:46	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:46	JKR	BR4FBZ BZ BZME EBZ X	
625896-094	S	MW01CO	05/23/19 10:48	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:48	JKR	BR4FBZ BZ BZME EBZ X	
625896-095	S	MW01CP	05/23/19 10:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-096	S	MW01CQ	05/23/19 10:53	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:53	JKR	BR4FBZ BZ BZME EBZ X	
625896-097	S	MW01CR	05/23/19 10:55	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:55	JKR	BR4FBZ BZ BZME EBZ X	
625896-098	S	MW01CS	05/23/19 10:58	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 10:58	JKR	BR4FBZ BZ BZME EBZ X	
625896-099	S	MW01CT	05/23/19 11:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-100	S	MW01CU	05/23/19 11:05	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:05	JKR	BR4FBZ BZ BZME EBZ X	
625896-101	S	MW01CV	05/23/19 11:10	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:10	JKR	BR4FBZ BZ BZME EBZ X	
625896-102	S	MW01CW	05/23/19 11:15	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:15	JKR	BR4FBZ BZ BZME EBZ X	
625896-103	S	MW01CX	05/23/19 11:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-104	S	MW01CY	05/23/19 11:25	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:25	JKR	BR4FBZ BZ BZME EBZ X	
625896-105	S	MW01CZ	05/23/19 11:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:30	JKR	BR4FBZ BZ BZME EBZ X	
625896-106	S	MW01DA	05/23/19 11:40	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:40	JKR	BR4FBZ BZ BZME EBZ X	
625896-107	S	MW01DB	05/23/19 11:45	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:45	JKR	BR4FBZ BZ BZME EBZ X	
625896-108	S	MW01DC	05/23/19 11:50	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:50	JKR	BR4FBZ BZ BZME EBZ X	
625896-109	S	MW01DD	05/23/19 11:55	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 11:55	JKR	BR4FBZ BZ BZME EBZ X	
625896-110	S	MW01DE	05/23/19 12:00	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:00	JKR	BR4FBZ BZ BZME EBZ X	
625896-111	S	MW01DF	05/23/19 12:05	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:05	JKR	BR4FBZ BZ BZME EBZ X	
625896-112	S	MW01DG	05/23/19 12:10	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:10	JKR	BR4FBZ BZ BZME EBZ X	
625896-113	S	MW01DH	05/23/19 12:15	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:15	JKR	BR4FBZ BZ BZME EBZ X	
625896-114	S	MW01DI	05/23/19 12:20	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:20	JKR	BR4FBZ BZ BZME EBZ X	
625896-115	S	MW01DJ	05/23/19 12:25	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:25	JKR	BR4FBZ BZ BZME EBZ X	
625896-116	S	MW01DK	05/23/19 12:30	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:30	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:



Inter-Office Shipment

Page 4 of 4

IOS Number **40656**

Date/Time: 06/05/19 10:34

Created by: Jessica Kramer

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave

Lab# To: **Lubbock**

Air Bill No.: 775400466003

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
625896-117	S	MW01DL	05/23/19 12:35	SW8021B	BTEX by EPA 8021B	06/05/19	06/06/19 12:35	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Jessica Kramer

Jessica Kramer

06/05/2019

Date Received:

Ashley Derstine

Cooler Temperature:

Ashley Derstine

06/06/2019 09:30

3.4



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Lubbock

IOS #: 40656

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Jessica Kramer

Date Sent: 06/05/2019 10:34 AM

Received By: Ashley Derstine

Date Received: 06/06/2019 09:30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.4
#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?	No

* 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:

Ashley Derstine

Date: 06/06/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 05/30/2019 10:58:00 AM

Work Order #: 625896

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)?	3
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 05/30/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 05/30/2019

Analytical Report 626369

for
LT Environmental, Inc.

Project Manager: Dan Moir

JRU 10

2RP-3179, 2RP-3464, 2RP-3245

18-JUN-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)

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)



18-JUN-19

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **626369**

JRU 10

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) 626369. 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. 626369 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

Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW01DM	S	05-29-19 14:30	118 ft	626369-001
MW01DN	S	05-29-19 14:50	119 ft	626369-002
MW01DO	S	05-29-19 15:10	120 ft	626369-003
MW01DP	S	05-29-19 15:30	121 ft	626369-004
MW01DQ	S	05-29-19 16:00	122 ft	626369-005



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3179, 2RP-3464, 2RP
Work Order Number(s): 626369

Report Date: 18-JUN-19
Date Received: 06/04/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092485 TPH by Texas1005

626369 K flag. Due to logistic failures with sample that is used for different departments; TPH only had access to the sample one day after the required holding time.



Certificate of Analysis Summary 626369

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3179,2RP-3464, 2RP-3245

Contact: Dan Moir

Project Location: Delaware Basin

Date Received in Lab: Tue Jun-04-19 12:11 pm

Report Date: 18-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	626369-001	626369-002	626369-003	626369-004	626369-005	
	<i>Field Id:</i>	MW01DM	MW01DN	MW01DO	MW01DP	MW01DQ	
	<i>Depth:</i>	118- ft	119- ft	120- ft	121- ft	122- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	May-29-19 14:30	May-29-19 14:50	May-29-19 15:10	May-29-19 15:30	May-29-19 16:00	
BTEX by SW 8260B SUB: T104704215-19-29	<i>Extracted:</i>	Jun-10-19 17:30	Jun-10-19 17:30	Jun-10-19 17:30	Jun-08-19 17:00	Jun-08-19 18:00	
	<i>Analyzed:</i>	Jun-11-19 00:40	Jun-11-19 01:00	Jun-11-19 01:19	Jun-08-19 17:25	Jun-09-19 04:32	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00100 0.00100	<0.00100 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
Toluene		<0.00100 0.00100	<0.00106 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
Ethylbenzene		<0.00100 0.00100	<0.00100 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
m,p-Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201	
o-Xylene		<0.00100 0.00100	<0.00100 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
Total Xylenes		<0.00100 0.00100	<0.00100 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
Total BTEX		<0.00100 0.00100	<0.00106 0.00100	<0.000996 0.000996	<0.000992 0.000992	<0.00101 0.00101	
Chloride by EPA 300	<i>Extracted:</i>	Jun-04-19 15:40	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	Jun-04-19 17:00	
	<i>Analyzed:</i>	Jun-05-19 08:12	Jun-05-19 11:25	Jun-05-19 11:32	Jun-05-19 11:39	Jun-05-19 11:46	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		11.1 5.00	13.8 5.00	7.11 5.02	7.10 4.98	6.59 5.00	
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jun-13-19 19:00	Jun-13-19 19:03	Jun-13-19 19:06	Jun-10-19 19:20	Jun-10-19 19:23	
	<i>Analyzed:</i>	Jun-14-19 13:11	Jun-14-19 13:30	Jun-14-19 13:48	Jun-11-19 08:18	Jun-11-19 08:36	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.7 49.7	<49.6 49.6	<49.7 49.7	<49.8 49.8	
Diesel Range Organics (DRO)		<50.0 50.0	<49.7 49.7	<49.6 49.6	<49.7 49.7	<49.8 49.8	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.7 49.7	<49.6 49.6	<49.7 49.7	<49.8 49.8	
Total TPH		<50.0 50.0	<49.7 49.7	<49.6 49.6	<49.7 49.7	<49.8 49.8	
Total GRO-DRO		<50.0 50.0	<49.7 49.7	<49.6 49.6	<49.7 49.7	<49.8 49.8	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DM**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-001

Date Collected: 05.29.19 14.30

Sample Depth: 118 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.04.19 15.40

Basis: Wet Weight

Seq Number: 3091196

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.1	5.00	mg/kg	06.05.19 08.12		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.13.19 19.00

Basis: Wet Weight

Seq Number: 3092485

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.14.19 13.11	UK	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.14.19 13.11	UK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.14.19 13.11	UK	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.14.19 13.11	UK	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	06.14.19 13.11	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.14.19 13.11	
o-Terphenyl	84-15-1	87	%	70-135	06.14.19 13.11	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DM**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-001

Date Collected: 05.29.19 14.30

Sample Depth: 118 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.11.19 00.40	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.11.19 00.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	73-132	06.11.19 00.40	
1,2-Dichloroethane-D4	17060-07-0	106	%	73-124	06.11.19 00.40	
Toluene-D8	2037-26-5	100	%	69-124	06.11.19 00.40	
4-Bromofluorobenzene	460-00-4	86	%	58-152	06.11.19 00.40	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DN**
Lab Sample Id: 626369-002

Matrix: Soil
Date Collected: 05.29.19 14.50

Date Received: 06.04.19 12.11
Sample Depth: 119 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091243

Date Prep: 06.04.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.8	5.00	mg/kg	06.05.19 11.25		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092485

Date Prep: 06.13.19 19.03

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.14.19 13.30	UK	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.14.19 13.30	UK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.14.19 13.30	UK	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.14.19 13.30	UK	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.14.19 13.30	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.14.19 13.30	
o-Terphenyl	84-15-1	80	%	70-135	06.14.19 13.30	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DN**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-002

Date Collected: 05.29.19 14.50

Sample Depth: 119 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.11.19 01.00	U	1
Toluene	108-88-3	0.00106	0.00100	mg/kg	06.11.19 01.00		1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.11.19 01.00	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.11.19 01.00	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.11.19 01.00	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.11.19 01.00	U	1
Total BTEX		0.00106	0.00100	mg/kg	06.11.19 01.00		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	111	%	73-132	06.11.19 01.00		
1,2-Dichloroethane-D4	17060-07-0	107	%	73-124	06.11.19 01.00		
Toluene-D8	2037-26-5	100	%	69-124	06.11.19 01.00		
4-Bromofluorobenzene	460-00-4	87	%	58-152	06.11.19 01.00		



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DO**
Lab Sample Id: 626369-003

Matrix: Soil
Date Collected: 05.29.19 15.10

Date Received: 06.04.19 12.11
Sample Depth: 120 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091243

Date Prep: 06.04.19 17.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.11	5.02	mg/kg	06.05.19 11.32		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092485

Date Prep: 06.13.19 19.06

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.6	49.6	mg/kg	06.14.19 13.48	UK	1
Diesel Range Organics (DRO)	C10C28DRO	<49.6	49.6	mg/kg	06.14.19 13.48	UK	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.6	49.6	mg/kg	06.14.19 13.48	UK	1
Total TPH	PHC635	<49.6	49.6	mg/kg	06.14.19 13.48	UK	1
Total GRO-DRO	PHC628	<49.6	49.6	mg/kg	06.14.19 13.48	UK	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.14.19 13.48	
o-Terphenyl	84-15-1	79	%	70-135	06.14.19 13.48	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DO**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-003

Date Collected: 05.29.19 15.10

Sample Depth: 120 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 01.19	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.11.19 01.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	73-132	06.11.19 01.19	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.11.19 01.19	
Toluene-D8	2037-26-5	94	%	69-124	06.11.19 01.19	
4-Bromofluorobenzene	460-00-4	94	%	58-152	06.11.19 01.19	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DP**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-004

Date Collected: 05.29.19 15.30

Sample Depth: 121 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091243

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.10	4.98	mg/kg	06.05.19 11.39		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 19.20

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 08.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 08.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 08.18	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 08.18	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 08.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.11.19 08.18	
o-Terphenyl	84-15-1	99	%	70-135	06.11.19 08.18	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DP**
Lab Sample Id: 626369-004

Matrix: Soil
Date Collected: 05.29.19 15.30

Date Received: 06.04.19 12.11
Sample Depth: 121 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3091665

Prep Method: SW5035A

% Moisture:

Date Prep: 06.08.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.08.19 17.25	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1
Total BTEX		<0.000992	0.000992	mg/kg	06.08.19 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	107	%	73-132	06.08.19 17.25	
1,2-Dichloroethane-D4	17060-07-0	112	%	73-124	06.08.19 17.25	
Toluene-D8	2037-26-5	102	%	69-124	06.08.19 17.25	
4-Bromofluorobenzene	460-00-4	90	%	58-152	06.08.19 17.25	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DQ**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-005

Date Collected: 05.29.19 16.00

Sample Depth: 122 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.04.19 17.00

Basis: Wet Weight

Seq Number: 3091243

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.59	5.00	mg/kg	06.05.19 11.46		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 19.23

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 08.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 08.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 08.36	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 08.36	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 08.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.11.19 08.36	
o-Terphenyl	84-15-1	96	%	70-135	06.11.19 08.36	



Certificate of Analytical Results 626369



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DQ**

Matrix: Soil

Date Received: 06.04.19 12.11

Lab Sample Id: 626369-005

Date Collected: 05.29.19 16.00

Sample Depth: 122 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.08.19 18.00

Basis: Wet Weight

Seq Number: 3091670

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1
Toluene	108-88-3	<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1
Ethylbenzene	100-41-4	<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1
m,p-Xylenes	179601-23-1	<0.00201	0.00201	mg/kg	06.09.19 04.32	U	1
o-Xylene	95-47-6	<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1
Total Xylenes	1330-20-7	<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1
Total BTEX		<0.00101	0.00101	mg/kg	06.09.19 04.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	105	%	73-132	06.09.19 04.32	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.09.19 04.32	
Toluene-D8	2037-26-5	101	%	69-124	06.09.19 04.32	
4-Bromofluorobenzene	460-00-4	91	%	58-152	06.09.19 04.32	

- 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 626369

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3091196

MB Sample Id: 7679199-1-BLK

Matrix: Solid

LCS Sample Id: 7679199-1-BKS

Prep Method: E300P

Date Prep: 06.04.19

LCSD Sample Id: 7679199-1-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	245	98	246	98	90-110	0	20	mg/kg	06.04.19 18:57	

Analytical Method: Chloride by EPA 300

Seq Number: 3091243

MB Sample Id: 7679201-1-BLK

Matrix: Solid

LCS Sample Id: 7679201-1-BKS

Prep Method: E300P

Date Prep: 06.04.19

LCSD Sample Id: 7679201-1-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	244	98	243	97	90-110	0	20	mg/kg	06.05.19 08:16	

Analytical Method: Chloride by EPA 300

Seq Number: 3091196

Parent Sample Id: 626367-021

Matrix: Soil

MS Sample Id: 626367-021 S

Prep Method: E300P

Date Prep: 06.04.19

MSD Sample Id: 626367-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	207	250	475	107	472	106	90-110	1	20	mg/kg	06.04.19 19:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3091196

Parent Sample Id: 626368-007

Matrix: Soil

MS Sample Id: 626368-007 S

Prep Method: E300P

Date Prep: 06.04.19

MSD Sample Id: 626368-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	633	248	866	94	866	94	90-110	0	20	mg/kg	06.04.19 20:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3091243

Parent Sample Id: 626455-001

Matrix: Soil

MS Sample Id: 626455-001 S

Prep Method: E300P

Date Prep: 06.04.19

MSD Sample Id: 626455-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.5	248	279	104	280	104	90-110	0	20	mg/kg	06.05.19 08:38	

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

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

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

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



QC Summary 626369

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3091243

Parent Sample Id: 626455-011

Matrix: Soil

MS Sample Id: 626455-011 S

Prep Method: E300P

Date Prep: 06.04.19

MSD Sample Id: 626455-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	430	252	657	90	657	90	90-110	0	20	mg/kg	06.05.19 10:19	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092168

MB Sample Id: 7679583-1-BLK

Matrix: Solid

LCS Sample Id: 7679583-1-BKS

Prep Method: TX1005P

Date Prep: 06.10.19

LCSD Sample Id: 7679583-1-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)	<49.7	993	1030	104	985	99	70-135	4	35	mg/kg	06.11.19 05:14	
Diesel Range Organics (DRO)	<49.7	993	1060	107	1110	112	70-135	5	35	mg/kg	06.11.19 05:14	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		114		114		70-135	%	06.11.19 05:14
o-Terphenyl	116		108		110		70-135	%	06.11.19 05:14

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092485

MB Sample Id: 7679863-1-BLK

Matrix: Solid

LCS Sample Id: 7679863-1-BKS

Prep Method: TX1005P

Date Prep: 06.13.19

LCSD Sample Id: 7679863-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1050	105	1040	104	70-135	1	35	mg/kg	06.14.19 11:20	
Diesel Range Organics (DRO)	<50.0	1000	986	99	979	98	70-135	1	35	mg/kg	06.14.19 11:20	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		86		88		70-135	%	06.14.19 11:20
o-Terphenyl	82		72		73		70-135	%	06.14.19 11:20

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092168

Parent Sample Id: 626505-010

Matrix: Soil

MS Sample Id: 626505-010 S

Prep Method: TX1005P

Date Prep: 06.10.19

MSD Sample Id: 626505-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.6	992	1010	102	1010	102	70-135	0	35	mg/kg	06.11.19 08:00	
Diesel Range Organics (DRO)	<49.6	992	1070	108	1080	109	70-135	1	35	mg/kg	06.11.19 08:00	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		116		70-135	%	06.11.19 08:00
o-Terphenyl	108		112		70-135	%	06.11.19 08:00

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

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

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 626369

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092485

Parent Sample Id: 626742-006

Matrix: Soil

MS Sample Id: 626742-006 S

Prep Method: TX1005P

Date Prep: 06.13.19

MSD Sample Id: 626742-006 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)	<49.5	990	1080	109	1020	103	70-135	6	35	mg/kg	06.14.19 12:15	
Diesel Range Organics (DRO)	<49.5	990	1010	102	956	97	70-135	5	35	mg/kg	06.14.19 12:15	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		87		70-135	%	06.14.19 12:15
o-Terphenyl	75		72		70-135	%	06.14.19 12:15

Analytical Method: BTEX by SW 8260B

Seq Number: 3091665

MB Sample Id: 7679545-1-BLK

Matrix: Solid

LCS Sample Id: 7679545-1-BKS

Prep Method: SW5035A

Date Prep: 06.08.19

LCSD Sample Id: 7679545-1-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	0.0500	0.0481	96	0.0462	92	62-132	4	25	mg/kg	06.08.19 14:13	
Toluene	<0.00100	0.0500	0.0470	94	0.0500	100	66-124	6	25	mg/kg	06.08.19 14:13	
Ethylbenzene	<0.00100	0.0500	0.0482	96	0.0512	102	71-134	6	25	mg/kg	06.08.19 14:13	
m,p-Xylenes	<0.00200	0.100	0.0977	98	0.103	103	69-128	5	25	mg/kg	06.08.19 14:13	
o-Xylene	<0.00100	0.0500	0.0503	101	0.0518	104	72-131	3	25	mg/kg	06.08.19 14:13	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		101		98		73-132	%	06.08.19 14:13
1,2-Dichloroethane-D4	109		103		100		73-124	%	06.08.19 14:13
Toluene-D8	99		97		102		69-124	%	06.08.19 14:13
4-Bromofluorobenzene	88		104		101		58-152	%	06.08.19 14:13

Analytical Method: BTEX by SW 8260B

Seq Number: 3091670

MB Sample Id: 7679549-1-BLK

Matrix: Solid

LCS Sample Id: 7679549-1-BKS

Prep Method: SW5035A

Date Prep: 06.08.19

LCSD Sample Id: 7679549-1-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	0.0500	0.0427	85	0.0459	92	62-132	7	25	mg/kg	06.09.19 01:56	
Toluene	<0.00100	0.0500	0.0446	89	0.0484	97	66-124	8	25	mg/kg	06.09.19 01:56	
Ethylbenzene	<0.00100	0.0500	0.0445	89	0.0478	96	71-134	7	25	mg/kg	06.09.19 01:56	
m,p-Xylenes	<0.00200	0.100	0.0887	89	0.0949	95	69-128	7	25	mg/kg	06.09.19 01:56	
o-Xylene	<0.00100	0.0500	0.0460	92	0.0487	97	72-131	6	25	mg/kg	06.09.19 01:56	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	96		100		98		73-132	%	06.09.19 01:56
1,2-Dichloroethane-D4	102		97		101		73-124	%	06.09.19 01:56
Toluene-D8	101		99		101		69-124	%	06.09.19 01:56
4-Bromofluorobenzene	92		103		100		58-152	%	06.09.19 01:56

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 626369

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3091848

MB Sample Id: 7679639-1-BLK

Matrix: Solid

LCS Sample Id: 7679639-1-BKS

Prep Method: SW5035A

Date Prep: 06.10.19

LCSD Sample Id: 7679639-1-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	0.0500	0.0443	89	0.0488	98	62-132	10	25	mg/kg	06.10.19 22:23	
Toluene	<0.00100	0.0500	0.0471	94	0.0502	100	66-124	6	25	mg/kg	06.10.19 22:23	
Ethylbenzene	<0.00100	0.0500	0.0488	98	0.0510	102	71-134	4	25	mg/kg	06.10.19 22:23	
m,p-Xylenes	<0.00200	0.100	0.0961	96	0.102	102	69-128	6	25	mg/kg	06.10.19 22:23	
o-Xylene	<0.00100	0.0500	0.0491	98	0.0538	108	72-131	9	25	mg/kg	06.10.19 22:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		101		98		73-132	%	06.10.19 22:23
1,2-Dichloroethane-D4	105		104		102		73-124	%	06.10.19 22:23
Toluene-D8	99		102		100		69-124	%	06.10.19 22:23
4-Bromofluorobenzene	90		102		99		58-152	%	06.10.19 22:23

Analytical Method: BTEX by SW 8260B

Seq Number: 3091665

Parent Sample Id: 626369-004

Matrix: Soil

MS Sample Id: 626369-004 S

Prep Method: SW5035A

Date Prep: 06.08.19

MSD Sample Id: 626369-004 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	0.0502	0.0451	90	0.0461	92	62-132	2	25	mg/kg	06.08.19 14:51	
Toluene	<0.00100	0.0502	0.0486	97	0.0493	98	66-124	1	25	mg/kg	06.08.19 14:51	
Ethylbenzene	<0.00100	0.0502	0.0499	99	0.0493	98	71-134	1	25	mg/kg	06.08.19 14:51	
m,p-Xylenes	<0.00201	0.100	0.0998	100	0.0988	98	69-128	1	25	mg/kg	06.08.19 14:51	
o-Xylene	<0.00100	0.0502	0.0507	101	0.0511	102	72-131	1	25	mg/kg	06.08.19 14:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	104		101		73-132	%	06.08.19 14:51
1,2-Dichloroethane-D4	105		101		73-124	%	06.08.19 14:51
Toluene-D8	101		105		69-124	%	06.08.19 14:51
4-Bromofluorobenzene	104		102		58-152	%	06.08.19 14:51

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 626369

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3091670

Parent Sample Id: 626369-005

Matrix: Soil

MS Sample Id: 626369-005 S

Prep Method: SW5035A

Date Prep: 06.08.19

MSD Sample Id: 626369-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00101	0.0503	0.0434	86	0.0434	86	62-132	0	25	mg/kg	06.09.19 02:35	
Toluene	<0.00101	0.0503	0.0453	90	0.0447	89	66-124	1	25	mg/kg	06.09.19 02:35	
Ethylbenzene	<0.00101	0.0503	0.0447	89	0.0444	88	71-134	1	25	mg/kg	06.09.19 02:35	
m,p-Xylenes	<0.00201	0.101	0.0893	88	0.0871	86	69-128	2	25	mg/kg	06.09.19 02:35	
o-Xylene	<0.00101	0.0503	0.0458	91	0.0452	90	72-131	1	25	mg/kg	06.09.19 02:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		103		73-132	%	06.09.19 02:35
1,2-Dichloroethane-D4	100		102		73-124	%	06.09.19 02:35
Toluene-D8	100		101		69-124	%	06.09.19 02:35
4-Bromofluorobenzene	106		100		58-152	%	06.09.19 02:35

Analytical Method: BTEX by SW 8260B

Seq Number: 3091848

Parent Sample Id: 626369-001

Matrix: Soil

MS Sample Id: 626369-001 S

Prep Method: SW5035A

Date Prep: 06.10.19

MSD Sample Id: 626369-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0468	94	0.0470	94	62-132	0	25	mg/kg	06.10.19 23:02	
Toluene	0.000812	0.0500	0.0494	97	0.0474	93	66-124	4	25	mg/kg	06.10.19 23:02	
Ethylbenzene	<0.00100	0.0500	0.0504	101	0.0493	98	71-134	2	25	mg/kg	06.10.19 23:02	
m,p-Xylenes	<0.00200	0.100	0.100	100	0.0974	97	69-128	3	25	mg/kg	06.10.19 23:02	
o-Xylene	<0.00100	0.0500	0.0529	106	0.0515	103	72-131	3	25	mg/kg	06.10.19 23:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		99		73-132	%	06.10.19 23:02
1,2-Dichloroethane-D4	94		96		73-124	%	06.10.19 23:02
Toluene-D8	103		101		69-124	%	06.10.19 23:02
4-Bromofluorobenzene	97		100		58-152	%	06.10.19 23:02

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

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

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

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



Chain of Custody

Work Order No:

1020369

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296

Hobbs, NM (575-392-7550) Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 1 of 1

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

Work Order Comments	
Program: UST/PST	☐ PRP ☐ brownfields ☐ RC ☐ Superfund
State of Project:	
Reporting Level: I	☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD	☐ ADAPT ☐ Other:

Project Name:	58010	Turn Around	
Project Number:	288-3179, 288-3464, 288-3245	Routine	☒
P.O. Number:		Rush:	
Sampler's Name:	Benjamin Beill	Due Date:	

Temp Blank:	Yes ☐ No ☒	Wet Ice:	Yes ☒ No ☐
Temperature (°C):	0.0	Thermometer:	100
Received Intact:	Yes ☒ No ☐	Correction Factor:	-0.2
Cooler Custody Seals:	Yes ☐ No ☒ N/A	Total Containers:	
Sample Custody Seals:	Yes ☐ No ☒ N/A		

ANALYSIS REQUEST		Work Order Notes	
TPH (EPA 8015)		TAT starts the day received by the lab, if received by 4:30pm	
BTEX (EPA 0-8021)		Sample Comments	
Chloride (EPA 300.0)			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0-8021)	Chloride (EPA 300.0)	Sample Comments
MW01 DM	S	5/24/14	1430	118'	1	X	X	X	
MW01 DN			1450	119'		X	X	X	
MW01 DO			1510	120'		X	X	X	
MW01 DP			1530	121'		X	X	X	
MW01 DQ			1600	122'		X	X	X	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		5/24/14			5/24/14
		6/3/14			6/3/14

ORIGIN ID:CAOA (281) 240-4200 SAMPLE CUSTODY XENCO LABORATORIES NM 1089 N CANAL ST CARLSBAD, NM 88220 UNITED STATES US	SHIP DATE: 03JUN19 ACTWGT: 25.00 LB CAD: 114488676/NET4100 DIMS: 22x13x13 IN BILL SENDER

TO SAMPLE RECEIVING

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

REF: (432) 704-5440
INV: PO: DEPT:




J191018010701un

TRK# 7753 7518 2121

0201

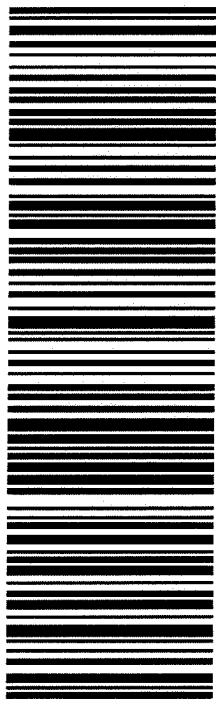
41 MAFA

TX-US LBB

TUE - 04 JUN HOLD

PRIORITY OVERNIGHT

HLD 79706



565J1/D210/23AD

After printing this label:

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Inter-Office Shipment

IOS Number : 40817

Date/Time: 06.06.2019 10:28 Created by: Jessica Kramer
 Lab# From: **Midland** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775411938644

Please send report to: Jessica Kramer
 Address: 1211 W. Florida Ave
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
626369-001	S	MW01DM	05.29.2019 14:30	SW8260BTX	BTEX by SW 8260B	06.10.2019	06.12.2019 14:30	JKR	BZ BZME EBZ XYLENE	
626369-001	S	MW01DM	05.29.2019 14:30	SW8015MOD_NM	TPH by SW8015 Mod	06.10.2019	06.12.2019 14:30	JKR	GRO-DRO PHCC10C28	
626369-002	S	MW01DN	05.29.2019 14:50	SW8260BTX	BTEX by SW 8260B	06.10.2019	06.12.2019 14:50	JKR	BZ BZME EBZ XYLENE	
626369-002	S	MW01DN	05.29.2019 14:50	SW8015MOD_NM	TPH by SW8015 Mod	06.10.2019	06.12.2019 14:50	JKR	GRO-DRO PHCC10C28	
626369-003	S	MW01DO	05.29.2019 15:10	SW8260BTX	BTEX by SW 8260B	06.10.2019	06.12.2019 15:10	JKR	BZ BZME EBZ XYLENE	
626369-003	S	MW01DO	05.29.2019 15:10	SW8015MOD_NM	TPH by SW8015 Mod	06.10.2019	06.12.2019 15:10	JKR	GRO-DRO PHCC10C28	
626369-004	S	MW01DP	05.29.2019 15:30	SW8015MOD_NM	TPH by SW8015 Mod	06.10.2019	06.12.2019 15:30	JKR	GRO-DRO PHCC10C28	
626369-004	S	MW01DP	05.29.2019 15:30	SW8260BTX	BTEX by SW 8260B	06.10.2019	06.12.2019 15:30	JKR	BZ BZME EBZ XYLENE	
626369-005	S	MW01DQ	05.29.2019 16:00	SW8015MOD_NM	TPH by SW8015 Mod	06.10.2019	06.12.2019 16:00	JKR	GRO-DRO PHCC10C28	
626369-005	S	MW01DQ	05.29.2019 16:00	SW8260BTX	BTEX by SW 8260B	06.10.2019	06.12.2019 16:00	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By: 
 Jessica Kramer

Date Relinquished: 06.07.2019

Received By: 
 Ashly Kowalski

Date Received: 06.07.2019 09:30

Cooler Temperature: 1.2



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 40817

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer

Date Sent: 06.06.2019 10.28 AM

Received By: Ashly Kowalski

Date Received: 06.07.2019 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.2
#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:

Ashly Kowalski

Date: 06.07.2019



XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/04/2019 12:11:00 PM

Work Order #: 626369

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)?	.4
#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)?	Yes
#18 Water VOC samples have zero headspace?	N/A

XENCO STAFFORD - TPH AND
BTEX

*** 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: 06/04/2019

Checklist reviewed by:

Jessica Kramer

Date: 06/06/2019

Analytical Report 626505

**for
LT Environmental, Inc.**

Project Manager: Ashley Ager

JRU 10

2RP-3404,2RP-3464-2RP-3179

13-JUN-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)

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)



13-JUN-19

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

Reference: XENCO Report No(s): **626505**
JRU 10
Project Address: Delaware Basin

Ashley Ager:

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) 626505. 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. 626505 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
Project Assistant

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

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



Sample Cross Reference 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW01DR	S	06-03-19 15:40	123 ft	626505-001
MW01DS	S	06-03-19 15:50	124 ft	626505-002
MW01DT	S	06-03-19 16:10	125 ft	626505-003
MW01DU	S	06-03-19 16:15	126 ft	626505-004
MW01DV	S	06-03-19 16:20	127 ft	626505-005
MW01DW	S	06-03-19 16:22	128 ft	626505-006
MW01DX	S	06-03-19 16:25	129 ft	626505-007
MW01DY	S	06-03-19 15:28	130 ft	626505-008
MW01DZ	S	06-03-19 16:30	131 ft	626505-009
MW01EA	S	06-03-19 16:35	132 ft	626505-010
MW01EB	S	06-03-19 16:40	133 ft	626505-011
MW01EC	S	06-03-19 16:45	134 ft	626505-012
MW01ED	S	06-03-19 16:50	135 ft	626505-013
MW01EE	S	06-03-19 16:55	136 ft	626505-014
MW01EF	S	06-03-19 17:00	137 ft	626505-015
MW01EG	S	06-04-19 09:00	138 ft	626505-016
MW01EH	S	06-04-19 09:05	139 ft	626505-017
MW01EI	S	06-04-19 09:10	140 ft	626505-018
MW01EJ	S	06-04-19 09:15	141 ft	626505-019
MW01EK	S	06-04-19 09:20	142 ft	626505-020
MW01EL	S	06-04-19 09:25	143 ft	626505-021
MW01EM	S	06-04-19 09:30	144 ft	626505-022
MW01EN	S	06-04-19 09:35	145 ft	626505-023
MW01EO	S	06-04-19 09:40	146 ft	626505-024
MW01EP	S	06-04-19 09:45	147 ft	626505-025
MW01EQ	S	06-04-19 09:50	148 ft	626505-026
MW01ER	S	06-04-19 09:55	149 ft	626505-027
MW01ES	S	06-04-19 10:00	150 ft	626505-028



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *JRU 10*

Project ID: 2RP-3404,2RP-3464-2RP
Work Order Number(s): 626505

Report Date: 13-JUN-19
Date Received: 06/05/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3092171 BTEX by SW 8260B

Lab Sample ID 626505-018 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene 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: 626505-018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 626505

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3404,2RP-3464-2RP-3179

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-05-19 12:23 pm

Report Date: 13-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	626505-001	626505-002	626505-003	626505-004	626505-005	626505-006
	Field Id:	MW01DR	MW01DS	MW01DT	MW01DU	MW01DV	MW01DW
	Depth:	123- ft	124- ft	125- ft	126- ft	127- ft	128- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-03-19 15:40	Jun-03-19 15:50	Jun-03-19 16:10	Jun-03-19 16:15	Jun-03-19 16:20	Jun-03-19 16:22
BTEX by SW 8260B SUB: T104704215-19-29	Extracted:	Jun-08-19 17:00	Jun-08-19 17:00	Jun-10-19 17:30	Jun-10-19 17:30	Jun-10-19 17:30	Jun-10-19 17:30
	Analyzed:	Jun-08-19 22:26	Jun-08-19 22:50	Jun-11-19 01:58	Jun-11-19 02:18	Jun-11-19 02:37	Jun-11-19 03:16
	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	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
	Toluene	<0.000996 0.000996	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
Ethylbenzene		<0.000996 0.000996	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
m,p-Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199
o-Xylene		<0.000996 0.000996	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
Total Xylenes		<0.000996 0.000996	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
Total BTEX		<0.000996 0.000996	<0.000990 0.000990	<0.000996 0.000996	<0.000994 0.000994	<0.000996 0.000996	<0.000996 0.000996
Chloride by EPA 300	Extracted:	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:40
	Analyzed:	Jun-06-19 20:57	Jun-06-19 21:02	Jun-06-19 21:18	Jun-06-19 21:23	Jun-06-19 21:29	Jun-06-19 21:34
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	15.2 5.02	11.0 4.99	19.9 4.95	53.3 4.99	37.4 4.97	54.7 5.01
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Jun-10-19 18:29	Jun-10-19 18:32	Jun-10-19 18:35	Jun-10-19 18:38	Jun-10-19 18:41	Jun-10-19 18:44
	Analyzed:	Jun-11-19 06:11	Jun-11-19 06:29	Jun-11-19 05:14	Jun-11-19 05:33	Jun-11-19 05:52	Jun-11-19 06:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	<49.8 49.8	<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.8 49.8
	Diesel Range Organics (DRO)	<49.8 49.8	<49.8 49.8	<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.8 49.8	<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.8 49.8
Total TPH		<49.8 49.8	<49.8 49.8	<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.8 49.8
Total GRO-DRO		<49.8 49.8	<49.8 49.8	<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.8 49.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 626505

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3404,2RP-3464-2RP-3179

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-05-19 12:23 pm

Report Date: 13-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	626505-007	626505-008	626505-009	626505-010	626505-011	626505-012
	Field Id:	MW01DX	MW01DY	MW01DZ	MW01EA	MW01EB	MW01EC
	Depth:	129- ft	130- ft	131- ft	132- ft	133- ft	134- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-03-19 16:25	Jun-03-19 15:28	Jun-03-19 16:30	Jun-03-19 16:35	Jun-03-19 16:40	Jun-03-19 16:45
BTEX by SW 8260B SUB: T104704215-19-29	Extracted:	Jun-10-19 17:30	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00
	Analyzed:	Jun-11-19 02:57	Jun-12-19 20:06	Jun-12-19 20:31	Jun-12-19 20:55	Jun-12-19 21:19	Jun-12-19 21:44
	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	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
	Toluene	<0.000994 0.000994	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
Ethylbenzene		<0.000994 0.000994	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
m,p-Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
o-Xylene		<0.000994 0.000994	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
Total Xylenes		<0.000994 0.000994	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
Total BTEX		<0.000994 0.000994	<0.00100 0.00100	<0.00100 0.00100	<0.000998 0.000998	<0.00100 0.00100	<0.000994 0.000994
Chloride by EPA 300	Extracted:	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:40	Jun-06-19 16:15	Jun-06-19 17:10	Jun-06-19 17:10
	Analyzed:	Jun-06-19 21:39	Jun-06-19 21:44	Jun-06-19 21:50	Jun-06-19 18:56	Jun-06-19 17:43	Jun-06-19 18:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	30.3 4.95	18.3 4.95	17.4 4.95	19.5 5.00	30.4 4.97	34.2 4.95
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Jun-10-19 18:47	Jun-10-19 18:50	Jun-10-19 18:53	Jun-10-19 18:56	Jun-10-19 19:05	Jun-10-19 19:08
	Analyzed:	Jun-11-19 06:29	Jun-11-19 14:09	Jun-11-19 07:24	Jun-11-19 07:42	Jun-11-19 14:27	Jun-11-19 07:06
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<49.7 49.7	<49.7 49.7	<49.7 49.7	<49.8 49.8	<49.7 49.7	<49.8 49.8
	Diesel Range Organics (DRO)	<49.7 49.7	<49.7 49.7	<49.7 49.7	<49.8 49.8	<49.7 49.7	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.7 49.7	<49.7 49.7	<49.7 49.7	<49.8 49.8	<49.7 49.7	<49.8 49.8
Total TPH		<49.7 49.7	<49.7 49.7	<49.7 49.7	<49.8 49.8	<49.7 49.7	<49.8 49.8
Total GRO-DRO		<49.7 49.7	<49.7 49.7	<49.7 49.7	<49.8 49.8	<49.7 49.7	<49.8 49.8

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 626505

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3404,2RP-3464-2RP-3179

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-05-19 12:23 pm

Report Date: 13-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	626505-013	626505-014	626505-015	626505-016	626505-017	626505-018
	Field Id:	MW01ED	MW01EE	MW01EF	MW01EG	MW01EH	MW01EI
	Depth:	135- ft	136- ft	137- ft	138- ft	139- ft	140- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-03-19 16:50	Jun-03-19 16:55	Jun-03-19 17:00	Jun-04-19 09:00	Jun-04-19 09:05	Jun-04-19 09:10
BTEX by SW 8260B SUB: T104704215-19-29	Extracted:	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 15:00	Jun-12-19 17:00
	Analyzed:	Jun-12-19 22:08	Jun-12-19 22:33	Jun-12-19 22:57	Jun-12-19 23:21	Jun-12-19 23:46	Jun-13-19 05:52
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Benzene		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
Toluene		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
Ethylbenzene		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
m,p-Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
o-Xylene		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
Total Xylenes		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
Total BTEX		<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000994 0.000994	<0.000996 0.000996	<0.000992 0.000992
Chloride by EPA 300	Extracted:	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10
	Analyzed:	Jun-06-19 18:56	Jun-06-19 19:03	Jun-06-19 19:10	Jun-06-19 19:17	Jun-06-19 19:25	Jun-06-19 19:46
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Chloride		11.7 5.02	12.9 4.96	10.9 5.04	12.8 5.04	14.6 5.04	11.9 5.00
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Jun-10-19 19:11	Jun-10-19 19:14	Jun-10-19 19:17	Jun-12-19 16:09	Jun-12-19 16:18	Jun-12-19 16:21
	Analyzed:	Jun-11-19 07:24	Jun-11-19 07:42	Jun-11-19 08:00	Jun-12-19 19:06	Jun-12-19 20:02	Jun-12-19 20:20
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		RL	RL	RL	RL	RL	RL
Gasoline Range Hydrocarbons (GRO)		<49.6 49.6	<49.9 49.9	<49.7 49.7	<49.9 49.9	<49.8 49.8	<49.7 49.7
Diesel Range Organics (DRO)		<49.6 49.6	<49.9 49.9	<49.7 49.7	<49.9 49.9	<49.8 49.8	<49.7 49.7
Motor Oil Range Hydrocarbons (MRO)		<49.6 49.6	<49.9 49.9	<49.7 49.7	<49.9 49.9	<49.8 49.8	<49.7 49.7
Total TPH		<49.6 49.6	<49.9 49.9	<49.7 49.7	<49.9 49.9	<49.8 49.8	<49.7 49.7
Total GRO-DRO		<49.6 49.6	<49.9 49.9	<49.7 49.7	<49.9 49.9	<49.8 49.8	<49.7 49.7

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 626505

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3404,2RP-3464-2RP-3179

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-05-19 12:23 pm

Report Date: 13-JUN-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	626505-019	626505-020	626505-021	626505-022	626505-023	626505-024
	<i>Field Id:</i>	MW01EJ	MW01EK	MW01EL	MW01EM	MW01EN	MW01EO
	<i>Depth:</i>	141- ft	142- ft	143- ft	144- ft	145- ft	146- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-04-19 09:15	Jun-04-19 09:20	Jun-04-19 09:25	Jun-04-19 09:30	Jun-04-19 09:35	Jun-04-19 09:40
BTEX by SW 8260B SUB: T104704215-19-29	<i>Extracted:</i>	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00
	<i>Analyzed:</i>	Jun-13-19 06:16	Jun-13-19 06:41	Jun-13-19 07:05	Jun-13-19 07:30	Jun-13-19 07:54	Jun-13-19 08:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
Toluene		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
Ethylbenzene		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
m,p-Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
o-Xylene		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
Total Xylenes		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
Total BTEX		<0.000992 0.000992	<0.000990 0.000990	<0.000990 0.000990	<0.00100 0.00100	<0.000996 0.000996	<0.000996 0.000996
Chloride by EPA 300	<i>Extracted:</i>	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10	Jun-07-19 08:15	Jun-07-19 08:15	Jun-07-19 08:15
	<i>Analyzed:</i>	Jun-06-19 20:08	Jun-06-19 20:15	Jun-06-19 20:23	Jun-07-19 09:27	Jun-07-19 09:49	Jun-07-19 09:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.00 5.00	15.8 5.00	16.9 5.03	7.25 5.00	12.8 4.98	28.1 5.04
TPH by SW8015 Mod SUB: T104704215-19-29	<i>Extracted:</i>	Jun-12-19 16:24	Jun-12-19 16:27	Jun-12-19 16:30	Jun-12-19 16:33	Jun-12-19 16:36	Jun-12-19 16:39
	<i>Analyzed:</i>	Jun-12-19 20:39	Jun-12-19 20:57	Jun-12-19 21:34	Jun-12-19 21:53	Jun-12-19 22:11	Jun-12-19 22:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.5 49.5	<49.5 49.5	<49.9 49.9
Diesel Range Organics (DRO)		<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.5 49.5	<49.5 49.5	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.5 49.5	<49.5 49.5	<49.9 49.9
Total TPH		<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.5 49.5	<49.5 49.5	<49.9 49.9
Total GRO-DRO		<49.5 49.5	<49.9 49.9	<49.7 49.7	<49.5 49.5	<49.5 49.5	<49.9 49.9

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 626505

LT Environmental, Inc., Arvada, CO

Project Name: JRU 10



Project Id: 2RP-3404,2RP-3464-2RP-3179

Contact: Ashley Ager

Project Location: Delaware Basin

Date Received in Lab: Wed Jun-05-19 12:23 pm

Report Date: 13-JUN-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	626505-025	626505-026	626505-027	626505-028		
	Field Id:	MW01EP	MW01EQ	MW01ER	MW01ES		
	Depth:	147- ft	148- ft	149- ft	150- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jun-04-19 09:45	Jun-04-19 09:50	Jun-04-19 09:55	Jun-04-19 10:00		
BTEX by SW 8260B SUB: T104704215-19-29	Extracted:	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00	Jun-12-19 17:00		
	Analyzed:	Jun-13-19 08:43	Jun-13-19 09:07	Jun-13-19 09:32	Jun-13-19 09:56		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
	Toluene	<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
Ethylbenzene		<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
m,p-Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
o-Xylene		<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
Total Xylenes		<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
Total BTEX		<0.000990 0.000990	<0.000998 0.000998	<0.00100 0.00100	<0.00100 0.00100		
Chloride by EPA 300	Extracted:	Jun-07-19 08:15	Jun-06-19 17:10	Jun-06-19 17:10	Jun-06-19 17:10		
	Analyzed:	Jun-07-19 10:04	Jun-06-19 20:30	Jun-06-19 20:37	Jun-06-19 20:44		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Chloride	15.8 4.97	13.3 4.95	15.8 4.96	18.4 5.01		
TPH by SW8015 Mod SUB: T104704215-19-29	Extracted:	Jun-12-19 16:42	Jun-12-19 16:45	Jun-12-19 16:48	Jun-12-19 16:51		
	Analyzed:	Jun-12-19 22:48	Jun-12-19 23:06	Jun-12-19 23:25	Jun-12-19 23:43		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		
	Diesel Range Organics (DRO)	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		
Total GRO-DRO		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DR**
Lab Sample Id: 626505-001

Matrix: Soil
Date Collected: 06.03.19 15.40

Date Received: 06.05.19 12.23
Sample Depth: 123 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091489

Date Prep: 06.06.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.2	5.02	mg/kg	06.06.19 20.57		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 18.29

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 06.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.11.19 06.11	
o-Terphenyl	84-15-1	112	%	70-135	06.11.19 06.11	

LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DR**
Lab Sample Id: 626505-001

Matrix: Soil
Date Collected: 06.03.19 15.40

Date Received: 06.05.19 12.23
Sample Depth: 123 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3091669

Prep Method: SW5035A

% Moisture:

Date Prep: 06.08.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.08.19 22.26	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.08.19 22.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	103	%	73-132	06.08.19 22.26	
1,2-Dichloroethane-D4	17060-07-0	107	%	73-124	06.08.19 22.26	
Toluene-D8	2037-26-5	97	%	69-124	06.08.19 22.26	
4-Bromofluorobenzene	460-00-4	97	%	58-152	06.08.19 22.26	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DS**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-002

Date Collected: 06.03.19 15.50

Sample Depth: 124 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 16.40

Basis: Wet Weight

Seq Number: 3091489

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.0	4.99	mg/kg	06.06.19 21.02		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 18.32

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 06.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 06.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 06.29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 06.29	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 06.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.11.19 06.29	
o-Terphenyl	84-15-1	118	%	70-135	06.11.19 06.29	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DS**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-002

Date Collected: 06.03.19 15.50

Sample Depth: 124 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.08.19 17.00

Basis: Wet Weight

Seq Number: 3091669

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.08.19 22.50	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.08.19 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	102	%	73-132	06.08.19 22.50	
1,2-Dichloroethane-D4	17060-07-0	107	%	73-124	06.08.19 22.50	
Toluene-D8	2037-26-5	100	%	69-124	06.08.19 22.50	
4-Bromofluorobenzene	460-00-4	103	%	58-152	06.08.19 22.50	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DT**
Lab Sample Id: 626505-003

Matrix: Soil
Date Collected: 06.03.19 16.10

Date Received: 06.05.19 12.23
Sample Depth: 125 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091489

Date Prep: 06.06.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.9	4.95	mg/kg	06.06.19 21.18		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 18.35

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.5	49.5	mg/kg	06.11.19 05.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.5	49.5	mg/kg	06.11.19 05.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.5	49.5	mg/kg	06.11.19 05.14	U	1
Total TPH	PHC635	<49.5	49.5	mg/kg	06.11.19 05.14	U	1
Total GRO-DRO	PHC628	<49.5	49.5	mg/kg	06.11.19 05.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	06.11.19 05.14	
o-Terphenyl	84-15-1	99	%	70-135	06.11.19 05.14	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DT**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-003

Date Collected: 06.03.19 16.10

Sample Depth: 125 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 01.58	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.11.19 01.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	111	%	73-132	06.11.19 01.58	
1,2-Dichloroethane-D4	17060-07-0	110	%	73-124	06.11.19 01.58	
Toluene-D8	2037-26-5	97	%	69-124	06.11.19 01.58	
4-Bromofluorobenzene	460-00-4	88	%	58-152	06.11.19 01.58	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DU**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-004

Date Collected: 06.03.19 16.15

Sample Depth: 126 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 16.40

Basis: Wet Weight

Seq Number: 3091489

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	53.3	4.99	mg/kg	06.06.19 21.23		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 18.38

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.11.19 05.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.11.19 05.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.11.19 05.33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.11.19 05.33	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.11.19 05.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	06.11.19 05.33	
o-Terphenyl	84-15-1	101	%	70-135	06.11.19 05.33	



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LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DU**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-004

Date Collected: 06.03.19 16.15

Sample Depth: 126 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 02.18	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1
Total BTEX		<0.000994	0.000994	mg/kg	06.11.19 02.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	109	%	73-132	06.11.19 02.18	
1,2-Dichloroethane-D4	17060-07-0	106	%	73-124	06.11.19 02.18	
Toluene-D8	2037-26-5	100	%	69-124	06.11.19 02.18	
4-Bromofluorobenzene	460-00-4	85	%	58-152	06.11.19 02.18	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DV**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-005

Date Collected: 06.03.19 16.20

Sample Depth: 127 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 16.40

Basis: Wet Weight

Seq Number: 3091489

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.4	4.97	mg/kg	06.06.19 21.29		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 18.41

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 05.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 05.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 05.52	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 05.52	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 05.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.11.19 05.52	
o-Terphenyl	84-15-1	95	%	70-135	06.11.19 05.52	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DV**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-005

Date Collected: 06.03.19 16.20

Sample Depth: 127 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 02.37	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.11.19 02.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	116	%	73-132	06.11.19 02.37	
1,2-Dichloroethane-D4	17060-07-0	105	%	73-124	06.11.19 02.37	
Toluene-D8	2037-26-5	97	%	69-124	06.11.19 02.37	
4-Bromofluorobenzene	460-00-4	89	%	58-152	06.11.19 02.37	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DW**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-006

Date Collected: 06.03.19 16.22

Sample Depth: 128 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 16.40

Basis: Wet Weight

Seq Number: 3091489

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.7	5.01	mg/kg	06.06.19 21.34		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 18.44

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 06.11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 06.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.11.19 06.11	
o-Terphenyl	84-15-1	101	%	70-135	06.11.19 06.11	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DW**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-006

Date Collected: 06.03.19 16.22

Sample Depth: 128 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 03.16	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.11.19 03.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	116	%	73-132	06.11.19 03.16	
1,2-Dichloroethane-D4	17060-07-0	95	%	73-124	06.11.19 03.16	
Toluene-D8	2037-26-5	95	%	69-124	06.11.19 03.16	
4-Bromofluorobenzene	460-00-4	89	%	58-152	06.11.19 03.16	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DX**
Lab Sample Id: 626505-007

Matrix: Soil
Date Collected: 06.03.19 16.25

Date Received: 06.05.19 12.23
Sample Depth: 129 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091489

Date Prep: 06.06.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.3	4.95	mg/kg	06.06.19 21.39		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 18.47

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 06.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 06.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 06.29	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 06.29	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 06.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	06.11.19 06.29	
o-Terphenyl	84-15-1	96	%	70-135	06.11.19 06.29	

LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DX**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-007

Date Collected: 06.03.19 16.25

Sample Depth: 129 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: HOP

% Moisture:

Analyst: HOP

Date Prep: 06.10.19 17.30

Basis: Wet Weight

Seq Number: 3091848

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.11.19 02.57	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1
Total BTEX		<0.000994	0.000994	mg/kg	06.11.19 02.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	131	%	73-132	06.11.19 02.57	
1,2-Dichloroethane-D4	17060-07-0	112	%	73-124	06.11.19 02.57	
Toluene-D8	2037-26-5	100	%	69-124	06.11.19 02.57	
4-Bromofluorobenzene	460-00-4	92	%	58-152	06.11.19 02.57	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DY**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-008

Date Collected: 06.03.19 15.28

Sample Depth: 130 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 16.40

Basis: Wet Weight

Seq Number: 3091489

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.3	4.95	mg/kg	06.06.19 21.44		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 18.50

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 14.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 14.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 14.09	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 14.09	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 14.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	06.11.19 14.09	
o-Terphenyl	84-15-1	96	%	70-135	06.11.19 14.09	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DY**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-008

Date Collected: 06.03.19 15.28

Sample Depth: 130 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.12.19 20.06	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.12.19 20.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.12.19 20.06	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.12.19 20.06	
Toluene-D8	2037-26-5	100	%	69-124	06.12.19 20.06	
4-Bromofluorobenzene	460-00-4	102	%	58-152	06.12.19 20.06	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DZ**
Lab Sample Id: 626505-009

Matrix: Soil
Date Collected: 06.03.19 16.30

Date Received: 06.05.19 12.23
Sample Depth: 131 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091489

Date Prep: 06.06.19 16.40

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.4	4.95	mg/kg	06.06.19 21.50		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 18.53

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 07.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 07.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 07.24	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 07.24	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 07.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	06.11.19 07.24	
o-Terphenyl	84-15-1	120	%	70-135	06.11.19 07.24	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01DZ**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-009

Date Collected: 06.03.19 16.30

Sample Depth: 131 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.12.19 20.31	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.12.19 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.12.19 20.31	
1,2-Dichloroethane-D4	17060-07-0	102	%	73-124	06.12.19 20.31	
Toluene-D8	2037-26-5	97	%	69-124	06.12.19 20.31	
4-Bromofluorobenzene	460-00-4	103	%	58-152	06.12.19 20.31	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EA**
Lab Sample Id: 626505-010

Matrix: Soil
Date Collected: 06.03.19 16.35

Date Received: 06.05.19 12.23
Sample Depth: 132 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091488

Date Prep: 06.06.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.5	5.00	mg/kg	06.06.19 18.56		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 18.56

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 07.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 07.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 07.42	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 07.42	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 07.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.11.19 07.42	
o-Terphenyl	84-15-1	119	%	70-135	06.11.19 07.42	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EA**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-010

Date Collected: 06.03.19 16.35

Sample Depth: 132 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.12.19 20.55	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1
Total BTEX		<0.000998	0.000998	mg/kg	06.12.19 20.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	73-132	06.12.19 20.55	
1,2-Dichloroethane-D4	17060-07-0	104	%	73-124	06.12.19 20.55	
Toluene-D8	2037-26-5	95	%	69-124	06.12.19 20.55	
4-Bromofluorobenzene	460-00-4	102	%	58-152	06.12.19 20.55	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EB**
Lab Sample Id: 626505-011

Matrix: Soil
Date Collected: 06.03.19 16.40

Date Received: 06.05.19 12.23
Sample Depth: 133 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30.4	4.97	mg/kg	06.06.19 17.43		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 19.05

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 14.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 14.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 14.27	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 14.27	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 14.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.11.19 14.27	
o-Terphenyl	84-15-1	95	%	70-135	06.11.19 14.27	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EB**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-011

Date Collected: 06.03.19 16.40

Sample Depth: 133 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.12.19 21.19	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.12.19 21.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	73-132	06.12.19 21.19	
1,2-Dichloroethane-D4	17060-07-0	100	%	73-124	06.12.19 21.19	
Toluene-D8	2037-26-5	98	%	69-124	06.12.19 21.19	
4-Bromofluorobenzene	460-00-4	105	%	58-152	06.12.19 21.19	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EC**
Lab Sample Id: 626505-012

Matrix: Soil
Date Collected: 06.03.19 16.45

Date Received: 06.05.19 12.23
Sample Depth: 134 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.2	4.95	mg/kg	06.06.19 18.48		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 19.08

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.11.19 07.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.11.19 07.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.11.19 07.06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.11.19 07.06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.11.19 07.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.11.19 07.06	
o-Terphenyl	84-15-1	101	%	70-135	06.11.19 07.06	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EC**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-012

Date Collected: 06.03.19 16.45

Sample Depth: 134 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.12.19 21.44	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1
Total BTEX		<0.000994	0.000994	mg/kg	06.12.19 21.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	73-132	06.12.19 21.44	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.12.19 21.44	
Toluene-D8	2037-26-5	98	%	69-124	06.12.19 21.44	
4-Bromofluorobenzene	460-00-4	105	%	58-152	06.12.19 21.44	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ED**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-013

Date Collected: 06.03.19 16.50

Sample Depth: 135 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 17.10

Basis: Wet Weight

Seq Number: 3091495

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.7	5.02	mg/kg	06.06.19 18.56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 19.11

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.6	49.6	mg/kg	06.11.19 07.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.6	49.6	mg/kg	06.11.19 07.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.6	49.6	mg/kg	06.11.19 07.24	U	1
Total TPH	PHC635	<49.6	49.6	mg/kg	06.11.19 07.24	U	1
Total GRO-DRO	PHC628	<49.6	49.6	mg/kg	06.11.19 07.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	06.11.19 07.24	
o-Terphenyl	84-15-1	103	%	70-135	06.11.19 07.24	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ED**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-013

Date Collected: 06.03.19 16.50

Sample Depth: 135 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.12.19 22.08	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.12.19 22.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	73-132	06.12.19 22.08	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.12.19 22.08	
Toluene-D8	2037-26-5	98	%	69-124	06.12.19 22.08	
4-Bromofluorobenzene	460-00-4	104	%	58-152	06.12.19 22.08	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EE**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-014

Date Collected: 06.03.19 16.55

Sample Depth: 136 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 17.10

Basis: Wet Weight

Seq Number: 3091495

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.9	4.96	mg/kg	06.06.19 19.03		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.10.19 19.14

Basis: Wet Weight

Seq Number: 3092168

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.11.19 07.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.11.19 07.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.11.19 07.42	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.11.19 07.42	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.11.19 07.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	06.11.19 07.42	
o-Terphenyl	84-15-1	101	%	70-135	06.11.19 07.42	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EE**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-014

Date Collected: 06.03.19 16.55

Sample Depth: 136 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.12.19 22.33	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.12.19 22.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	73-132	06.12.19 22.33	
1,2-Dichloroethane-D4	17060-07-0	105	%	73-124	06.12.19 22.33	
Toluene-D8	2037-26-5	100	%	69-124	06.12.19 22.33	
4-Bromofluorobenzene	460-00-4	91	%	58-152	06.12.19 22.33	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EF**
Lab Sample Id: 626505-015

Matrix: Soil
Date Collected: 06.03.19 17.00

Date Received: 06.05.19 12.23
Sample Depth: 137 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.9	5.04	mg/kg	06.06.19 19.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092168

Date Prep: 06.10.19 19.17

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.11.19 08.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.11.19 08.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.11.19 08.00	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.11.19 08.00	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.11.19 08.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	06.11.19 08.00	
o-Terphenyl	84-15-1	103	%	70-135	06.11.19 08.00	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EF**
Lab Sample Id: 626505-015

Matrix: Soil
Date Collected: 06.03.19 17.00

Date Received: 06.05.19 12.23
Sample Depth: 137 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092122

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 15.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.12.19 22.57	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.12.19 22.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.12.19 22.57	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.12.19 22.57	
Toluene-D8	2037-26-5	95	%	69-124	06.12.19 22.57	
4-Bromofluorobenzene	460-00-4	99	%	58-152	06.12.19 22.57	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EG**
Lab Sample Id: 626505-016

Matrix: Soil
Date Collected: 06.04.19 09.00

Date Received: 06.05.19 12.23
Sample Depth: 138 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	5.04	mg/kg	06.06.19 19.17		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.09

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.12.19 19.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.12.19 19.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.12.19 19.06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.12.19 19.06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.12.19 19.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.12.19 19.06	
o-Terphenyl	84-15-1	100	%	70-135	06.12.19 19.06	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EG**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-016

Date Collected: 06.04.19 09.00

Sample Depth: 138 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1
Toluene	108-88-3	<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1
Ethylbenzene	100-41-4	<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.12.19 23.21	U	1
o-Xylene	95-47-6	<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1
Total Xylenes	1330-20-7	<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1
Total BTEX		<0.000994	0.000994	mg/kg	06.12.19 23.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101	%	73-132	06.12.19 23.21	
1,2-Dichloroethane-D4	17060-07-0	106	%	73-124	06.12.19 23.21	
Toluene-D8	2037-26-5	101	%	69-124	06.12.19 23.21	
4-Bromofluorobenzene	460-00-4	98	%	58-152	06.12.19 23.21	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EH**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-017

Date Collected: 06.04.19 09.05

Sample Depth: 139 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 17.10

Basis: Wet Weight

Seq Number: 3091495

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	5.04	mg/kg	06.06.19 19.25		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.12.19 16.18

Basis: Wet Weight

Seq Number: 3092162

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.12.19 20.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.12.19 20.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.12.19 20.02	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.12.19 20.02	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.12.19 20.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	06.12.19 20.02	
o-Terphenyl	84-15-1	105	%	70-135	06.12.19 20.02	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EH**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-017

Date Collected: 06.04.19 09.05

Sample Depth: 139 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 15.00

Basis: Wet Weight

Seq Number: 3092122

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.12.19 23.46	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.12.19 23.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.12.19 23.46	
1,2-Dichloroethane-D4	17060-07-0	105	%	73-124	06.12.19 23.46	
Toluene-D8	2037-26-5	95	%	69-124	06.12.19 23.46	
4-Bromofluorobenzene	460-00-4	99	%	58-152	06.12.19 23.46	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EI**
Lab Sample Id: 626505-018

Matrix: Soil
Date Collected: 06.04.19 09.10

Date Received: 06.05.19 12.23
Sample Depth: 140 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.9	5.00	mg/kg	06.06.19 19.46		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.21

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.12.19 20.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.12.19 20.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.12.19 20.20	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.12.19 20.20	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.12.19 20.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.12.19 20.20	
o-Terphenyl	84-15-1	98	%	70-135	06.12.19 20.20	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EI**
Lab Sample Id: 626505-018

Matrix: Soil
Date Collected: 06.04.19 09.10

Date Received: 06.05.19 12.23
Sample Depth: 140 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.13.19 05.52	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1
Total BTEX		<0.000992	0.000992	mg/kg	06.13.19 05.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	95	%	73-132	06.13.19 05.52	
1,2-Dichloroethane-D4	17060-07-0	100	%	73-124	06.13.19 05.52	
Toluene-D8	2037-26-5	97	%	69-124	06.13.19 05.52	
4-Bromofluorobenzene	460-00-4	101	%	58-152	06.13.19 05.52	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EJ**
Lab Sample Id: 626505-019

Matrix: Soil
Date Collected: 06.04.19 09.15

Date Received: 06.05.19 12.23
Sample Depth: 141 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	06.06.19 20.08	U	1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.24

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.5	49.5	mg/kg	06.12.19 20.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.5	49.5	mg/kg	06.12.19 20.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.5	49.5	mg/kg	06.12.19 20.39	U	1
Total TPH	PHC635	<49.5	49.5	mg/kg	06.12.19 20.39	U	1
Total GRO-DRO	PHC628	<49.5	49.5	mg/kg	06.12.19 20.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.12.19 20.39	
o-Terphenyl	84-15-1	107	%	70-135	06.12.19 20.39	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EJ**
Lab Sample Id: 626505-019

Matrix: Soil
Date Collected: 06.04.19 09.15

Date Received: 06.05.19 12.23
Sample Depth: 141 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1
Toluene	108-88-3	<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1
Ethylbenzene	100-41-4	<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.13.19 06.16	U	1
o-Xylene	95-47-6	<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1
Total Xylenes	1330-20-7	<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1
Total BTEX		<0.000992	0.000992	mg/kg	06.13.19 06.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.13.19 06.16	
1,2-Dichloroethane-D4	17060-07-0	97	%	73-124	06.13.19 06.16	
Toluene-D8	2037-26-5	91	%	69-124	06.13.19 06.16	
4-Bromofluorobenzene	460-00-4	105	%	58-152	06.13.19 06.16	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EK**
Lab Sample Id: 626505-020

Matrix: Soil
Date Collected: 06.04.19 09.20

Date Received: 06.05.19 12.23
Sample Depth: 142 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.8	5.00	mg/kg	06.06.19 20.15		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.27

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.12.19 20.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.12.19 20.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.12.19 20.57	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.12.19 20.57	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.12.19 20.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.12.19 20.57	
o-Terphenyl	84-15-1	100	%	70-135	06.12.19 20.57	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EK**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-020

Date Collected: 06.04.19 09.20

Sample Depth: 142 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 17.00

Basis: Wet Weight

Seq Number: 3092171

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.13.19 06.41	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.13.19 06.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	73-132	06.13.19 06.41	
1,2-Dichloroethane-D4	17060-07-0	100	%	73-124	06.13.19 06.41	
Toluene-D8	2037-26-5	98	%	69-124	06.13.19 06.41	
4-Bromofluorobenzene	460-00-4	95	%	58-152	06.13.19 06.41	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EL**
Lab Sample Id: 626505-021

Matrix: Soil
Date Collected: 06.04.19 09.25

Date Received: 06.05.19 12.23
Sample Depth: 143 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.9	5.03	mg/kg	06.06.19 20.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.30

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.7	49.7	mg/kg	06.12.19 21.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.7	49.7	mg/kg	06.12.19 21.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.7	49.7	mg/kg	06.12.19 21.34	U	1
Total TPH	PHC635	<49.7	49.7	mg/kg	06.12.19 21.34	U	1
Total GRO-DRO	PHC628	<49.7	49.7	mg/kg	06.12.19 21.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	06.12.19 21.34	
o-Terphenyl	84-15-1	97	%	70-135	06.12.19 21.34	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EL**
Lab Sample Id: 626505-021

Matrix: Soil
Date Collected: 06.04.19 09.25

Date Received: 06.05.19 12.23
Sample Depth: 143 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.13.19 07.05	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.13.19 07.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.13.19 07.05	
1,2-Dichloroethane-D4	17060-07-0	102	%	73-124	06.13.19 07.05	
Toluene-D8	2037-26-5	90	%	69-124	06.13.19 07.05	
4-Bromofluorobenzene	460-00-4	98	%	58-152	06.13.19 07.05	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EM**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-022

Date Collected: 06.04.19 09.30

Sample Depth: 144 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.07.19 08.15

Basis: Wet Weight

Seq Number: 3091715

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.25	5.00	mg/kg	06.07.19 09.27		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.12.19 16.33

Basis: Wet Weight

Seq Number: 3092162

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.5	49.5	mg/kg	06.12.19 21.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.5	49.5	mg/kg	06.12.19 21.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.5	49.5	mg/kg	06.12.19 21.53	U	1
Total TPH	PHC635	<49.5	49.5	mg/kg	06.12.19 21.53	U	1
Total GRO-DRO	PHC628	<49.5	49.5	mg/kg	06.12.19 21.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	06.12.19 21.53	
o-Terphenyl	84-15-1	97	%	70-135	06.12.19 21.53	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EM**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-022

Date Collected: 06.04.19 09.30

Sample Depth: 144 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 17.00

Basis: Wet Weight

Seq Number: 3092171

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.13.19 07.30	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.13.19 07.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	73-132	06.13.19 07.30	
1,2-Dichloroethane-D4	17060-07-0	102	%	73-124	06.13.19 07.30	
Toluene-D8	2037-26-5	100	%	69-124	06.13.19 07.30	
4-Bromofluorobenzene	460-00-4	104	%	58-152	06.13.19 07.30	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EN**
Lab Sample Id: 626505-023

Matrix: Soil
Date Collected: 06.04.19 09.35

Date Received: 06.05.19 12.23
Sample Depth: 145 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091715

Date Prep: 06.07.19 08.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.8	4.98	mg/kg	06.07.19 09.49		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.36

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.5	49.5	mg/kg	06.12.19 22.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.5	49.5	mg/kg	06.12.19 22.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.5	49.5	mg/kg	06.12.19 22.11	U	1
Total TPH	PHC635	<49.5	49.5	mg/kg	06.12.19 22.11	U	1
Total GRO-DRO	PHC628	<49.5	49.5	mg/kg	06.12.19 22.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	06.12.19 22.11	
o-Terphenyl	84-15-1	95	%	70-135	06.12.19 22.11	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EN**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-023

Date Collected: 06.04.19 09.35

Sample Depth: 145 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 17.00

Basis: Wet Weight

Seq Number: 3092171

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.13.19 07.54	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.13.19 07.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100	%	73-132	06.13.19 07.54	
1,2-Dichloroethane-D4	17060-07-0	103	%	73-124	06.13.19 07.54	
Toluene-D8	2037-26-5	97	%	69-124	06.13.19 07.54	
4-Bromofluorobenzene	460-00-4	102	%	58-152	06.13.19 07.54	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EO**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-024

Date Collected: 06.04.19 09.40

Sample Depth: 146 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.07.19 08.15

Basis: Wet Weight

Seq Number: 3091715

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.1	5.04	mg/kg	06.07.19 09.56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.12.19 16.39

Basis: Wet Weight

Seq Number: 3092162

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.12.19 22.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.12.19 22.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.12.19 22.29	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.12.19 22.29	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.12.19 22.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.12.19 22.29	
o-Terphenyl	84-15-1	98	%	70-135	06.12.19 22.29	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EO**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-024

Date Collected: 06.04.19 09.40

Sample Depth: 146 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 17.00

Basis: Wet Weight

Seq Number: 3092171

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1
Toluene	108-88-3	<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1
Ethylbenzene	100-41-4	<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1
m,p-Xylenes	179601-23-1	<0.00199	0.00199	mg/kg	06.13.19 08.18	U	1
o-Xylene	95-47-6	<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1
Total Xylenes	1330-20-7	<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1
Total BTEX		<0.000996	0.000996	mg/kg	06.13.19 08.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	98	%	73-132	06.13.19 08.18	
1,2-Dichloroethane-D4	17060-07-0	96	%	73-124	06.13.19 08.18	
Toluene-D8	2037-26-5	101	%	69-124	06.13.19 08.18	
4-Bromofluorobenzene	460-00-4	102	%	58-152	06.13.19 08.18	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EP**
Lab Sample Id: 626505-025

Matrix: Soil
Date Collected: 06.04.19 09.45

Date Received: 06.05.19 12.23
Sample Depth: 147 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091715

Date Prep: 06.07.19 08.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.8	4.97	mg/kg	06.07.19 10.04		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.42

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.12.19 22.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.12.19 22.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.12.19 22.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.12.19 22.48	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	06.12.19 22.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	06.12.19 22.48	
o-Terphenyl	84-15-1	98	%	70-135	06.12.19 22.48	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EP**
Lab Sample Id: 626505-025

Matrix: Soil
Date Collected: 06.04.19 09.45

Date Received: 06.05.19 12.23
Sample Depth: 147 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
Toluene	108-88-3	<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
Ethylbenzene	100-41-4	<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
m,p-Xylenes	179601-23-1	<0.00198	0.00198	mg/kg	06.13.19 08.43	U	1
o-Xylene	95-47-6	<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
Total Xylenes	1330-20-7	<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
Total BTEX		<0.000990	0.000990	mg/kg	06.13.19 08.43	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	101		%	73-132	06.13.19 08.43	
1,2-Dichloroethane-D4	17060-07-0	107		%	73-124	06.13.19 08.43	
Toluene-D8	2037-26-5	94		%	69-124	06.13.19 08.43	
4-Bromofluorobenzene	460-00-4	94		%	58-152	06.13.19 08.43	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EQ**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-026

Date Collected: 06.04.19 09.50

Sample Depth: 148 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 17.10

Basis: Wet Weight

Seq Number: 3091495

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.3	4.95	mg/kg	06.06.19 20.30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.12.19 16.45

Basis: Wet Weight

Seq Number: 3092162

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	06.12.19 23.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	06.12.19 23.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	06.12.19 23.06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	06.12.19 23.06	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	06.12.19 23.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	06.12.19 23.06	
o-Terphenyl	84-15-1	103	%	70-135	06.12.19 23.06	

LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01EQ**
Lab Sample Id: 626505-026

Matrix: Soil
Date Collected: 06.04.19 09.50

Date Received: 06.05.19 12.23
Sample Depth: 148 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.13.19 09.07	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
Total BTEX		<0.000998	0.000998	mg/kg	06.13.19 09.07	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	100		%	73-132	06.13.19 09.07	
1,2-Dichloroethane-D4	17060-07-0	105		%	73-124	06.13.19 09.07	
Toluene-D8	2037-26-5	96		%	69-124	06.13.19 09.07	
4-Bromofluorobenzene	460-00-4	100		%	58-152	06.13.19 09.07	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ER**
Lab Sample Id: 626505-027

Matrix: Soil
Date Collected: 06.04.19 09.55

Date Received: 06.05.19 12.23
Sample Depth: 149 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3091495

Date Prep: 06.06.19 17.10

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.8	4.96	mg/kg	06.06.19 20.37		1

Analytical Method: TPH by SW8015 Mod

Tech: ISU

Analyst: ISU

Seq Number: 3092162

Date Prep: 06.12.19 16.48

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	06.12.19 23.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	06.12.19 23.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	06.12.19 23.25	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	06.12.19 23.25	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	06.12.19 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	06.12.19 23.25	
o-Terphenyl	84-15-1	104	%	70-135	06.12.19 23.25	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ER**
Lab Sample Id: 626505-027

Matrix: Soil
Date Collected: 06.04.19 09.55

Date Received: 06.05.19 12.23
Sample Depth: 149 ft

Analytical Method: BTEX by SW 8260B

Tech: SAD

Analyst: SAD

Seq Number: 3092171

Prep Method: SW5035A

% Moisture:

Date Prep: 06.12.19 17.00

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.13.19 09.32	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.13.19 09.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
Dibromofluoromethane	1868-53-7	97	%	73-132	06.13.19 09.32		
1,2-Dichloroethane-D4	17060-07-0	113	%	73-124	06.13.19 09.32		
Toluene-D8	2037-26-5	96	%	69-124	06.13.19 09.32		
4-Bromofluorobenzene	460-00-4	99	%	58-152	06.13.19 09.32		



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ES**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-028

Date Collected: 06.04.19 10.00

Sample Depth: 150 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 06.06.19 17.10

Basis: Wet Weight

Seq Number: 3091495

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	18.4	5.01	mg/kg	06.06.19 20.44		1

Analytical Method: TPH by SW8015 Mod

Prep Method: TX1005P

Tech: ISU

% Moisture:

Analyst: ISU

Date Prep: 06.12.19 16.51

Basis: Wet Weight

Seq Number: 3092162

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	06.12.19 23.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	06.12.19 23.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	06.12.19 23.43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	06.12.19 23.43	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	06.12.19 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	06.12.19 23.43	
o-Terphenyl	84-15-1	102	%	70-135	06.12.19 23.43	



Certificate of Analytical Results 626505



LT Environmental, Inc., Arvada, CO

JRU 10

Sample Id: **MW01ES**

Matrix: Soil

Date Received: 06.05.19 12.23

Lab Sample Id: 626505-028

Date Collected: 06.04.19 10.00

Sample Depth: 150 ft

Analytical Method: BTEX by SW 8260B

Prep Method: SW5035A

Tech: SAD

% Moisture:

Analyst: SAD

Date Prep: 06.12.19 17.00

Basis: Wet Weight

Seq Number: 3092171

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	06.13.19 09.56	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1
Total BTEX		<0.00100	0.00100	mg/kg	06.13.19 09.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
Dibromofluoromethane	1868-53-7	99	%	73-132	06.13.19 09.56	
1,2-Dichloroethane-D4	17060-07-0	102	%	73-124	06.13.19 09.56	
Toluene-D8	2037-26-5	90	%	69-124	06.13.19 09.56	
4-Bromofluorobenzene	460-00-4	101	%	58-152	06.13.19 09.56	

- 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 626505

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3091488

MB Sample Id: 7679359-1-BLK

Matrix: Solid

LCS Sample Id: 7679359-1-BKS

Prep Method: E300P

Date Prep: 06.06.19

LCSD Sample Id: 7679359-1-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	248	99	247	99	90-110	0	20	mg/kg	06.06.19 16:24	

Analytical Method: Chloride by EPA 300

Seq Number: 3091499

MB Sample Id: 7679360-1-BLK

Matrix: Solid

LCS Sample Id: 7679360-1-BKS

Prep Method: E300P

Date Prep: 06.06.19

LCSD Sample Id: 7679360-1-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	250	100	250	100	90-110	0	20	mg/kg	06.06.19 19:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3091495

MB Sample Id: 7679409-1-BLK

Matrix: Solid

LCS Sample Id: 7679409-1-BKS

Prep Method: E300P

Date Prep: 06.06.19

LCSD Sample Id: 7679409-1-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	238	95	238	95	90-110	0	20	mg/kg	06.06.19 17:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3091715

MB Sample Id: 7679417-1-BLK

Matrix: Solid

LCS Sample Id: 7679417-1-BKS

Prep Method: E300P

Date Prep: 06.07.19

LCSD Sample Id: 7679417-1-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	237	95	237	95	90-110	0	20	mg/kg	06.07.19 09:13	

Analytical Method: Chloride by EPA 300

Seq Number: 3091488

Parent Sample Id: 626734-001

Matrix: Soil

MS Sample Id: 626734-001 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626734-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	252	354	100	357	101	90-110	1	20	mg/kg	06.06.19 16:40	

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

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

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 626505

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3091488

Parent Sample Id: 626735-002

Matrix: Soil

MS Sample Id: 626735-002 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626735-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	59.3	248	311	101	304	99	90-110	2	20	mg/kg	06.06.19 17:53	

Analytical Method: Chloride by EPA 300

Seq Number: 3091489

Parent Sample Id: 626462-004

Matrix: Soil

MS Sample Id: 626462-004 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626462-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	250	390	100	390	100	90-110	0	20	mg/kg	06.06.19 19:33	

Analytical Method: Chloride by EPA 300

Seq Number: 3091489

Parent Sample Id: 626462-009

Matrix: Soil

MS Sample Id: 626462-009 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626462-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	674	248	888	86	887	86	90-110	0	20	mg/kg	06.06.19 20:47	X

Analytical Method: Chloride by EPA 300

Seq Number: 3091495

Parent Sample Id: 626505-011

Matrix: Soil

MS Sample Id: 626505-011 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626505-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	30.4	249	269	96	269	96	90-110	0	20	mg/kg	06.06.19 17:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3091495

Parent Sample Id: 626505-017

Matrix: Soil

MS Sample Id: 626505-017 S

Prep Method: E300P

Date Prep: 06.06.19

MSD Sample Id: 626505-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14.6	252	263	99	260	99	90-110	1	20	mg/kg	06.06.19 19:32	

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

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

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

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



QC Summary 626505

LT Environmental, Inc.

JRU 10

Analytical Method: Chloride by EPA 300

Seq Number: 3091715

Parent Sample Id: 626505-022

Matrix: Soil

MS Sample Id: 626505-022 S

Prep Method: E300P

Date Prep: 06.07.19

MSD Sample Id: 626505-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.25	250	247	96	247	96	90-110	0	20	mg/kg	06.07.19 09:35	

Analytical Method: Chloride by EPA 300

Seq Number: 3091715

Parent Sample Id: 626604-007

Matrix: Soil

MS Sample Id: 626604-007 S

Prep Method: E300P

Date Prep: 06.07.19

MSD Sample Id: 626604-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.855	249	237	95	237	95	90-110	0	20	mg/kg	06.07.19 11:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092168

MB Sample Id: 7679583-1-BLK

Matrix: Solid

LCS Sample Id: 7679583-1-BKS

Prep Method: TX1005P

Date Prep: 06.10.19

LCSD Sample Id: 7679583-1-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)	<49.7	993	1030	104	985	99	70-135	4	35	mg/kg	06.11.19 05:14	
Diesel Range Organics (DRO)	<49.7	993	1060	107	1110	112	70-135	5	35	mg/kg	06.11.19 05:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		114		114		70-135	%	06.11.19 05:14
o-Terphenyl	116		108		110		70-135	%	06.11.19 05:14

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092162

MB Sample Id: 7679766-1-BLK

Matrix: Solid

LCS Sample Id: 7679766-1-BKS

Prep Method: TX1005P

Date Prep: 06.12.19

LCSD Sample Id: 7679766-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1070	107	70-135	1	35	mg/kg	06.12.19 18:29	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1120	112	70-135	0	35	mg/kg	06.12.19 18:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		98		99		70-135	%	06.12.19 18:29
o-Terphenyl	100		91		92		70-135	%	06.12.19 18:29

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

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

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 626505

LT Environmental, Inc.

JRU 10

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092168

Parent Sample Id: 626505-010

Matrix: Soil

MS Sample Id: 626505-010 S

Prep Method: TX1005P

Date Prep: 06.10.19

MSD Sample Id: 626505-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.6	992	1010	102	1010	102	70-135	0	35	mg/kg	06.11.19 08:00	
Diesel Range Organics (DRO)	<49.6	992	1070	108	1080	109	70-135	1	35	mg/kg	06.11.19 08:00	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		116		70-135	%	06.11.19 08:00
o-Terphenyl	108		112		70-135	%	06.11.19 08:00

Analytical Method: TPH by SW8015 Mod

Seq Number: 3092162

Parent Sample Id: 626505-016

Matrix: Soil

MS Sample Id: 626505-016 S

Prep Method: TX1005P

Date Prep: 06.12.19

MSD Sample Id: 626505-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.6	992	1140	115	1090	110	70-135	4	35	mg/kg	06.12.19 19:25	
Diesel Range Organics (DRO)	<49.6	992	1210	122	1120	113	70-135	8	35	mg/kg	06.12.19 19:25	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		102		70-135	%	06.12.19 19:25
o-Terphenyl	101		94		70-135	%	06.12.19 19:25

Analytical Method: BTEX by SW 8260B

Seq Number: 3091669

MB Sample Id: 7679548-1-BLK

Matrix: Solid

LCS Sample Id: 7679548-1-BKS

Prep Method: SW5035A

Date Prep: 06.08.19

LCSD Sample Id: 7679548-1-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	0.0500	0.0489	98	0.0462	92	62-132	6	25	mg/kg	06.08.19 14:40	
Toluene	<0.00100	0.0500	0.0472	94	0.0449	90	66-124	5	25	mg/kg	06.08.19 14:40	
Ethylbenzene	<0.00100	0.0500	0.0489	98	0.0465	93	71-134	5	25	mg/kg	06.08.19 14:40	
m,p-Xylenes	<0.00200	0.100	0.101	101	0.0951	95	69-128	6	25	mg/kg	06.08.19 14:40	
o-Xylene	<0.00100	0.0500	0.0514	103	0.0486	97	72-131	6	25	mg/kg	06.08.19 14:40	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	104		104		105		73-132	%	06.08.19 14:40
1,2-Dichloroethane-D4	102		99		98		73-124	%	06.08.19 14:40
Toluene-D8	98		100		101		69-124	%	06.08.19 14:40
4-Bromofluorobenzene	98		97		91		58-152	%	06.08.19 14:40

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3091848

MB Sample Id: 7679639-1-BLK

Matrix: Solid

LCS Sample Id: 7679639-1-BKS

Prep Method: SW5035A

Date Prep: 06.10.19

LCSD Sample Id: 7679639-1-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	0.0500	0.0443	89	0.0488	98	62-132	10	25	mg/kg	06.10.19 22:23	
Toluene	<0.00100	0.0500	0.0471	94	0.0502	100	66-124	6	25	mg/kg	06.10.19 22:23	
Ethylbenzene	<0.00100	0.0500	0.0488	98	0.0510	102	71-134	4	25	mg/kg	06.10.19 22:23	
m,p-Xylenes	<0.00200	0.100	0.0961	96	0.102	102	69-128	6	25	mg/kg	06.10.19 22:23	
o-Xylene	<0.00100	0.0500	0.0491	98	0.0538	108	72-131	9	25	mg/kg	06.10.19 22:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	100		101		98		73-132	%	06.10.19 22:23
1,2-Dichloroethane-D4	105		104		102		73-124	%	06.10.19 22:23
Toluene-D8	99		102		100		69-124	%	06.10.19 22:23
4-Bromofluorobenzene	90		102		99		58-152	%	06.10.19 22:23

Analytical Method: BTEX by SW 8260B

Seq Number: 3092122

MB Sample Id: 7679808-1-BLK

Matrix: Solid

LCS Sample Id: 7679808-1-BKS

Prep Method: SW5035A

Date Prep: 06.12.19

LCSD Sample Id: 7679808-1-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	0.0500	0.0469	94	0.0482	96	62-132	3	25	mg/kg	06.12.19 13:10	
Toluene	<0.00100	0.0500	0.0480	96	0.0456	91	66-124	5	25	mg/kg	06.12.19 13:10	
Ethylbenzene	<0.00100	0.0500	0.0490	98	0.0476	95	71-134	3	25	mg/kg	06.12.19 13:10	
m,p-Xylenes	<0.00200	0.100	0.0982	98	0.0946	95	69-128	4	25	mg/kg	06.12.19 13:10	
o-Xylene	<0.00100	0.0500	0.0504	101	0.0486	97	72-131	4	25	mg/kg	06.12.19 13:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	97		99		101		73-132	%	06.12.19 13:10
1,2-Dichloroethane-D4	99		97		100		73-124	%	06.12.19 13:10
Toluene-D8	97		103		97		69-124	%	06.12.19 13:10
4-Bromofluorobenzene	101		105		98		58-152	%	06.12.19 13:10

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

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

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

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



QC Summary 626505

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3092171

MB Sample Id: 7679833-1-BLK

Matrix: Solid

LCS Sample Id: 7679833-1-BKS

Prep Method: SW5035A

Date Prep: 06.12.19

LCSD Sample Id: 7679833-1-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	0.0500	0.0448	90	0.0463	93	62-132	3	25	mg/kg	06.13.19 02:37	
Toluene	<0.00100	0.0500	0.0430	86	0.0460	92	66-124	7	25	mg/kg	06.13.19 02:37	
Ethylbenzene	<0.00100	0.0500	0.0438	88	0.0466	93	71-134	6	25	mg/kg	06.13.19 02:37	
m,p-Xylenes	<0.00200	0.100	0.0868	87	0.0929	93	69-128	7	25	mg/kg	06.13.19 02:37	
o-Xylene	<0.00100	0.0500	0.0458	92	0.0485	97	72-131	6	25	mg/kg	06.13.19 02:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	94		100		98		73-132	%	06.13.19 02:37
1,2-Dichloroethane-D4	100		99		97		73-124	%	06.13.19 02:37
Toluene-D8	101		99		101		69-124	%	06.13.19 02:37
4-Bromofluorobenzene	107		99		101		58-152	%	06.13.19 02:37

Analytical Method: BTEX by SW 8260B

Seq Number: 3091669

Parent Sample Id: 626811-001

Matrix: Soil

MS Sample Id: 626811-001 S

Prep Method: SW5035A

Date Prep: 06.08.19

MSD Sample Id: 626811-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00111	0.0555	0.0382	69	0.0272	49	62-132	34	25	mg/kg	06.09.19 00:52	XF
Toluene	<0.00111	0.0555	0.0350	63	0.0237	43	66-124	39	25	mg/kg	06.09.19 00:52	XF
Ethylbenzene	<0.00111	0.0555	0.0350	63	0.0228	41	71-134	42	25	mg/kg	06.09.19 00:52	XF
m,p-Xylenes	<0.00222	0.111	0.0703	63	0.0455	41	69-128	43	25	mg/kg	06.09.19 00:52	XF
o-Xylene	<0.00111	0.0555	0.0351	63	0.0230	42	72-131	42	25	mg/kg	06.09.19 00:52	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	104		105		73-132	%	06.09.19 00:52
1,2-Dichloroethane-D4	113		114		73-124	%	06.09.19 00:52
Toluene-D8	100		96		69-124	%	06.09.19 00:52
4-Bromofluorobenzene	96		95		58-152	%	06.09.19 00:52

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 626505

LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3091848

Parent Sample Id: 626369-001

Matrix: Soil

MS Sample Id: 626369-001 S

Prep Method: SW5035A

Date Prep: 06.10.19

MSD Sample Id: 626369-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.0500	0.0468	94	0.0470	94	62-132	0	25	mg/kg	06.10.19 23:02	
Toluene	0.000812	0.0500	0.0494	97	0.0474	93	66-124	4	25	mg/kg	06.10.19 23:02	
Ethylbenzene	<0.00100	0.0500	0.0504	101	0.0493	98	71-134	2	25	mg/kg	06.10.19 23:02	
m,p-Xylenes	<0.00200	0.100	0.100	100	0.0974	97	69-128	3	25	mg/kg	06.10.19 23:02	
o-Xylene	<0.00100	0.0500	0.0529	106	0.0515	103	72-131	3	25	mg/kg	06.10.19 23:02	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	102		99		73-132	%	06.10.19 23:02
1,2-Dichloroethane-D4	94		96		73-124	%	06.10.19 23:02
Toluene-D8	103		101		69-124	%	06.10.19 23:02
4-Bromofluorobenzene	97		100		58-152	%	06.10.19 23:02

Analytical Method: BTEX by SW 8260B

Seq Number: 3092171

Parent Sample Id: 626505-018

Matrix: Soil

MS Sample Id: 626505-018 S

Prep Method: SW5035A

Date Prep: 06.12.19

MSD Sample Id: 626505-018 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	0.0499	0.0349	70	0.0345	69	62-132	1	25	mg/kg	06.13.19 03:25	
Toluene	<0.000998	0.0499	0.0335	67	0.0356	71	66-124	6	25	mg/kg	06.13.19 03:25	
Ethylbenzene	<0.000998	0.0499	0.0343	69	0.0323	64	71-134	6	25	mg/kg	06.13.19 03:25	X
m,p-Xylenes	<0.00200	0.0998	0.0665	67	0.0630	63	69-128	5	25	mg/kg	06.13.19 03:25	X
o-Xylene	<0.000998	0.0499	0.0330	66	0.0318	63	72-131	4	25	mg/kg	06.13.19 03:25	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
Dibromofluoromethane	101		100		73-132	%	06.13.19 03:25
1,2-Dichloroethane-D4	103		106		73-124	%	06.13.19 03:25
Toluene-D8	99		108		69-124	%	06.13.19 03:25
4-Bromofluorobenzene	100		100		58-152	%	06.13.19 03:25

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

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

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

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



LT Environmental, Inc.

JRU 10

Analytical Method: BTEX by SW 8260B

Seq Number: 3092122

Parent Sample Id: 627310-001

Matrix: Soil

MS Sample Id: 627310-001 S

Prep Method: SW5035A

Date Prep: 06.12.19

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00109	0.0546	0.0302	55	62-132	mg/kg	06.12.19 14:25	X
Toluene	<0.00109	0.0546	0.0302	55	66-124	mg/kg	06.12.19 14:25	X
Ethylbenzene	<0.00109	0.0546	0.0306	56	71-134	mg/kg	06.12.19 14:25	X
m,p-Xylenes	<0.00218	0.109	0.0604	55	69-128	mg/kg	06.12.19 14:25	X
o-Xylene	<0.00109	0.0546	0.0282	52	72-131	mg/kg	06.12.19 14:25	X

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
Dibromofluoromethane	105		73-132	%	06.12.19 14:25
1,2-Dichloroethane-D4	106		73-124	%	06.12.19 14:25
Toluene-D8	101		69-124	%	06.12.19 14:25
4-Bromofluorobenzene	104		58-152	%	06.12.19 14:25

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

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

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

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

Work Order No.:

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) 565-3443 Lubbock, TX (806) 794-1296
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813)
Hobbs, NM (575-392-7550)

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Page 1 of 1

Project Manager:	Ashley Agger	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	3104 E Green Street
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	970.385.1096	Email:	bbeilill@ttenv.com

Work Order Comments	
Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐	
State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	JRU 10	Turn Around
Project Number:	2RR-3404, 2RR-3444, 2RR-3174	Routine ☒
P.O. Number:		Rush:
Sampler's Name:	Benjamin Belli	Due Date:

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature ("C):	0.0/0.9				Thermometer		
Received Intact:	Yes	No					
Cooler Custody Seals:	Yes	No	N/A		Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No	N/A		Total Containers:		

[illegible][illegible]

Total 200.7 / 6010 200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470 / 774

1631 / 245.1 / 7470 / 7471 : Hg

of service. Xencio 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 Xencio. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xencio, 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 <i>[Signature]</i>	<i>[Signature]</i>	6/1/19 2:35	2	<i>[Signature]</i>	6/5/19
3			4		1:22:33
5			6		



Page 7 of 7

Work Order Comments									
Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐									
State of Project:									
Reporting Level: I ☐ Level III ☐ PST/UST ☐ RRP ☐ Level IV ☐									
Deliverables: EDD ☐ ADAPT ☐ Other: _____									

SAMPLE RECEIPT				Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	0.0/0.0			Thermometer					
Received Intact:	Yes			No					
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:		0.2			
Sample Custody Seals:	Yes	No	N/A	Total Containers:					

Number of Containers

EPA 8015)

EPA 0=8021)

e (EPA 300.0)

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

[illegible]

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 		6/4/19 @ 12:35	2 		6/5/19
3 			4		11-29-20
5			6		

Page 1 of 1

Work Order Comments									
Program: UST/PST ☐ PRP ☐ brownfields ☐ RC ☐ superfund ☐									
State of Project:									
Reporting Level II ☐ level III ☐ ST/UST ☐ RRP ☐ level IV ☐									
Deliverables: EDD ☐ ADaPT ☐ Other:									

SAMPLE RECEIPT			
Temp Blank:	Yes	No	Wet Ice:
	Yes	No	Yes
Temperature (°C):	Thermometer in		
Received intact:	Yes	No	
Cooler Custody Seals:	Yes	No	Correction Factor:
Sample Custody Seals:	Yes	No	Total Containers:

Number of Containers

EPA 8015)

EPA 0-8021)

e (EPA 300.0)

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

[illegible]

Total	200.7 / 6010	200.8 / 6020:	Circle Method(s) and Metal(s) to be analyzed
8RCRA	13PPM	Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn
			TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
			1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		6/4/19 1235			6/5/19
		4			12/2/22
		6			

ORIGIN ID:CAOA (281) 240-4200
 SAMPLE CUSTODY
 XENCO LABORATORIES NM
 1089 N CANAL ST
 CARLSBAD, NM 88220
 UNITED STATES US

SHIP DATE: 04JUN19
 ACTWGT: 57.00LB
 CAD: 114488676/NET 4100
 DIMS: 13x9x9 IN
 BILL SENDER

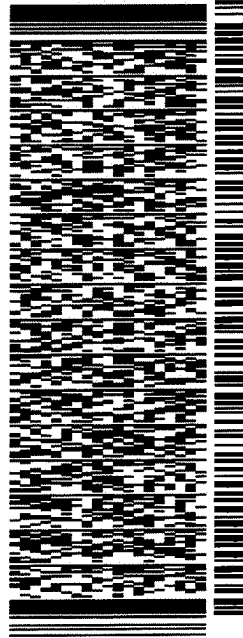
TO **SAMPLE RECEIVING**

3600 S COUNTY ROAD 1276

MIDLAND TX 79706

REF: (432) 704-5440

PO: DEPT:



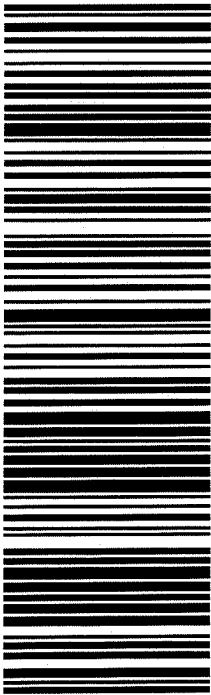
565J1/D210/23AD

TRK# 7753 8676 8923
 0201

WED - 05 JUN HOLD
PRIORITY OVERNIGHT

41 MAFA

HLD 79706
 TX-US LBB



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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Inter-Office Shipment

IOS Number : 40814

Date/Time: 06.06.2019 10:25 Created by: Jessica Kramer
 Lab# From: **Midland** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775411938644

Please send report to: Jessica Kramer
 Address: 1211 W. Florida Ave
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
626505-001	S	MW01DR	06.03.2019 15:40	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-001	S	MW01DR	06.03.2019 15:40	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-002	S	MW01DS	06.03.2019 15:50	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-002	S	MW01DS	06.03.2019 15:50	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-003	S	MW01DT	06.03.2019 16:10	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-003	S	MW01DT	06.03.2019 16:10	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-004	S	MW01DU	06.03.2019 16:15	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-004	S	MW01DU	06.03.2019 16:15	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-005	S	MW01DV	06.03.2019 16:20	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-005	S	MW01DV	06.03.2019 16:20	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-006	S	MW01DW	06.03.2019 16:22	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-006	S	MW01DW	06.03.2019 16:22	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-007	S	MW01DX	06.03.2019 16:25	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-007	S	MW01DX	06.03.2019 16:25	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-008	S	MW01DY	06.03.2019 15:28	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-008	S	MW01DY	06.03.2019 15:28	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-009	S	MW01DZ	06.03.2019 16:30	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-009	S	MW01DZ	06.03.2019 16:30	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-010	S	MW01EA	06.03.2019 16:35	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-010	S	MW01EA	06.03.2019 16:35	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-011	S	MW01EB	06.03.2019 16:40	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-011	S	MW01EB	06.03.2019 16:40	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-012	S	MW01EC	06.03.2019 16:45	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-012	S	MW01EC	06.03.2019 16:45	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-013	S	MW01ED	06.03.2019 16:50	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	

Inter-Office Shipment

IOS Number : 40814

Date/Time: 06.06.2019 10:25 Created by: Jessica Kramer
 Lab# From: **Midland** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775411938644

Please send report to: Jessica Kramer
 Address: 1211 W. Florida Ave
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
626505-013	S	MW01ED	06.03.2019 16:50	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-014	S	MW01EE	06.03.2019 16:55	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-014	S	MW01EE	06.03.2019 16:55	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-015	S	MW01EF	06.03.2019 17:00	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.17.2019	JKR	BZ BZME EBZ XYLENE	
626505-015	S	MW01EF	06.03.2019 17:00	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.17.2019	JKR	GRO-DRO PHCC10C28	
626505-016	S	MW01EG	06.04.2019 09:00	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-016	S	MW01EG	06.04.2019 09:00	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-017	S	MW01EH	06.04.2019 09:05	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-017	S	MW01EH	06.04.2019 09:05	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-018	S	MW01EI	06.04.2019 09:10	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-018	S	MW01EI	06.04.2019 09:10	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-019	S	MW01EJ	06.04.2019 09:15	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-019	S	MW01EJ	06.04.2019 09:15	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-020	S	MW01EK	06.04.2019 09:20	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-020	S	MW01EK	06.04.2019 09:20	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-021	S	MW01EL	06.04.2019 09:25	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-021	S	MW01EL	06.04.2019 09:25	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-022	S	MW01EM	06.04.2019 09:30	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-022	S	MW01EM	06.04.2019 09:30	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-023	S	MW01EN	06.04.2019 09:35	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-023	S	MW01EN	06.04.2019 09:35	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-024	S	MW01EO	06.04.2019 09:40	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-024	S	MW01EO	06.04.2019 09:40	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-025	S	MW01EP	06.04.2019 09:45	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-025	S	MW01EP	06.04.2019 09:45	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number : 40814

Date/Time: 06.06.2019 10:25 Created by: Jessica Kramer
 Lab# From: **Midland** Delivery Priority:
 Lab# To: **Houston** Air Bill No.: 775411938644

Please send report to: Jessica Kramer
 Address: 1211 W. Florida Ave
 E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
626505-026	S	MW01EQ	06.04.2019 09:50	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-026	S	MW01EQ	06.04.2019 09:50	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-027	S	MW01ER	06.04.2019 09:55	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	
626505-027	S	MW01ER	06.04.2019 09:55	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-028	S	MW01ES	06.04.2019 10:00	SW8015MOD_NM	TPH by SW8015 Mod	06.11.2019	06.18.2019	JKR	GRO-DRO PHCC10C28	
626505-028	S	MW01ES	06.04.2019 10:00	SW8260BTX	BTEX by SW 8260B	06.11.2019	06.18.2019	JKR	BZ BZME EBZ XYLENE	

Inter Office Shipment or Sample Comments:

Relinquished By: Jessica Kramer
 Date Relinquished: Jessica Kramer
06.07.2019

Received By: Ashly Kowalski
 Date Received: 06.07.2019 09:30
 Cooler Temperature: 1.2



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 40814

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Jessica Kramer

Date Sent: 06.06.2019 10.25 AM

Received By: Ashly Kowalski

Date Received: 06.07.2019 09.30 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.2
#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:

Ashly Kowalski

Date: 06.07.2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 06/05/2019 12:23:00 PM

Work Order #: 626505

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)?	.4
#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?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	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

Brianna Teel

Date: 06/05/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 06/05/2019



ATTACHMENT 3: LITHOLOGIC/SOIL SAMPLING LOGS

Compliance · Engineering · Remediation

Identifier:

PHOI

Date: _____

Date: 3/5/19 - 3/7/19

Project Name:

SRU 10

RP Number:

317d

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: *GL*

Method: TH

Hole Diameter:	

Total Depth:	20

Lat/Long:

Field Screening:

TPH / LHL

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D		1705	N	1	6'			caliche/sand - light brown, ^{no} plasticity
D		907	N	2	8'			caliche/sand, light brown, ^{no} plasticity
D		920	N	3	10'			caliche/sand, tan, no plasticity
D		1550	N	4	12'			sandy w/ gravel, Red, no plasticity large 2-4cm rocks
D		1530	N	5	14'			sandy w/ gravel, Red, no plasticity
D		1570		6	16'			sandy w/ gravel, Red, no plasticity
P		1544		7	18'			Sandy Clay w/ gravel, dark brown/red low plasticity
D	2105	1530		8	20'			sandy clay w/ gravel dark red/brown low plasticity
D		1440		9	22'			clay, dark red low-med plasticity
D		580		10	24'			clay, dark red, med plasticity
D		484		11	25'			clay, dark red/brown, med plasticity
					12'			



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

Compliance · Engineering · Remediation

Identifier: P1101A

Date: 03/06/19

Project Name: JRV-10

RP Number:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Logged By:

Method: Pot hole

Hole Diameter: 2.5ft

Total Depth:

Comments:

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0930	dry	380	2168	N		0	35'	S	Clay Red PG odor
						1			
0950	dry	380	2008	N		2	37'	S	Clay Red PG odor
						3			
1030	dry	380	1974	N		4	38'	S	Clay Red PG odor
						5			
1320	dry	380	1694	N		6	40'	S	Clay Red PG odor
						7			
1545	dry	452	1805	N		8	41'	S	Clay Red PG odor
						9			
1420	dry	380	1736	N		10	41.5'	S	Clay Red PG odor
						11			
1500	dry	380	1841	N		12	42'	S	Clay Red PG odor



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

Compliance · Engineering · Remediation

Identifier:

PH02

Date:

3/7/2019

Project Name:

JRU10

RP Number:

3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: GG

Method: TH

Lat/Long:

Field Screening:

TPH/CHL

Hole Diameter:

Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D		1653	N	1	0	6		Tan/brown, low plasticity caliche/fine grained
D		1570	N	2	1	8		reddish brown w/some gravel/sandy loam low plasticity
D		1619	N	3	2	10		Sandy loam w/gravel, reddish brown No plasticity
D		1560	N	4	3	12		Dark red/brown, clay w/some sand No plasticity
D		1487	N	5	4	14		Dark red/brown, clay w/some sand no plasticity
D		1480	N	6	5	16		Dark red/brown sand w/some clay/some gravel no plasticity
D		1469	N	7	6	18		Dark red/brown sandy clay, some gravel no plasticity
D		1820		8	7	20		Dark red/brown, sandy clay, no plasticity
D		1484		9	8	22		Dark red, clay, med plasticity
D		1590		10	9	24		Dark red clay, med plasticity
D		1690		11	10	26		Dark red, clay, med plasticity
D		1680		12	11	28		Dark red clay, med plasticity
D		1510		13	12	30		Dark red clay, med plasticity

D 1613 14 32 Dark red clay, m



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Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 80'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CALICHE FILL	CALICHE, dry, tan, poorly consolidated, no odor, fill
					1			
					2			
					3			
					4			
m	1,260	1,547	Y	BH01	5	5'	CALICHE	CALICHE, moist, light brown - tan, moderately consolidated, strong H/C odor
					6			
					7			
					8			
					9		SP-SC	clayey SAND, dry, brown - red, poorly graded, trace tan well consolidated caliche, strong H/C odor.
D	1,116	1,759	Y	BH01A	10	10'		
					11			
					12			



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Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
D	1,001	1,756	Y	BH01B	15	15'	CL	sandy clay, dry, red-dark red, low plasticity, trace tan well consolidated caliche, strong H ₂ S odor.
					16			
					17			
					18			
					19			
D	928	1,678	Y	BH01C	20	20'	CL	SAA (Same As Above)
					21			
					22			
					23			
					24			



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Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
M	1,260	1,620	Y	BH01D	25	25'	ML	clayey SILT, moist, red-dark red, low plasticity, trace red t. sand, strong H/C odor.
					26			
					27			
					28			
					29			
M	2,105	1,772	Y	BH01E	30	30'	ML	SAA (Same As Above)
					31			
					32			
					33			
					34			
M	2,438	2,147	Y	BH01F	35	35'	ML	SAA
					36			



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Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
m	556	1,997	y	BH01G	40	40'	ML	clayey SILT, moist, red-dark red, low plasticity, trace red f. sand, strong H/C odor.
					41			
					42			
					43			
					44			
m	403	2,218	y	BH01H	45	45'	ML	SAA (same as Above)
					46			
					47			
					48			



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Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	403	1701	Y	BH01I	48			clayey SILT, moist, red-dark red, low plasticity, trace red f. sand, strong H/C odor.
					49			
					50	50'	ML	
					51			
					52			
M	665	844.5	Y	BH01J	53			SILT, moist, red-dark red, low plasticity, trace red clay, moderate H/C odor.
					54			
					55	55'	ML	
					56			
					57			
M	320	1205	Y	BH01K	58			SA (Same As Above)
					59			
					60	60'	ML	



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Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: BH01

Date: 4/3/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					60			
					61			
					62			
					63			
					64			
m	320	625	Y	BH01L	65	65'	ML	SILT, moist, red-dark red, low plasticity, trace red clay, moderate H/C odor.
					66			
					67			
					68			
					69			
D	<112	135.5	N	BH01M	70	70'	ML	Sandy SILT, dry, light brown + red, low plasticity, some light brown well consolidated caliche, low H/C odor.
					71			
					72			



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508 West Stevens Street
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Identifier: BH01

Date: 4/3/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					72			
					73			
					74			
D	556	282.5	Y	BH01N	75	75'	CL	silty CLAY, dry, red-brown, low plasticity, low H/C odor.
					76			
					77			
					78			
					79			silty CLAY, dry, red-brown, low plasticity, trace red f.-m. sand, no H/C odor.
D	<112	48.0	N	BH01O	80	80'	CL	
					81			↑ E.O.B. @ 80'
					82			
					83			
					84			



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Identifier: BH02

Date: 4/4/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 80'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SAND, dry, brown - light brown, f.-m., poorly graded, trace roots, no odor.
					1			
					2			
					3			
					4		CALICHE	CALICHE, dry, light brown - tan, poorly consolidated, some brown m. sand, no odor.
D	<112	7.8	N	BH02	5	5'		
					6			
					7			
					8			
					9		ML	Sandy SILT, dry, light brown - red, non plastic, no odor.
D	275	3.1	N	BH02A	10	10'	ML	
					11			
					12			



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Compliance · Engineering · Remediation

Identifier: BH02

Date: 4/4/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
D	320	2.7	N	BH02B	15	15'	ML	Sandy SILT, dry, red - light brown, non plastic, trace red clay, no odor.
					16			
					17			
					18			
					19			
D	198	3.1	N	BH02C	20	20'	ML	SAA
					21			
					22			
					23			
					24			



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Compliance · Engineering · Remediation

Identifier: BH02

Date: 4/4/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
D	<112	2.6	N	BH02D	25	25'	ML	Clayey SILT, dry, red-brown, low plasticity, no H/C odor.
					26	Air Rotary 25'-80'		Air Rotary Begins
					27			
					28			
					29			
D	<112	1.0	N	BH02E	30	30'	ML	SAA (Same As Above)
					31			
					32			
					33			
					34			
D	<112	1.3	N	BH02F	35	35'	ML	SAA
					36			



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508 West Stevens Street
Carlsbad, New Mexico 88220

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Identifier: BH02

Date: 4/4/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
D	<112	0.9	N	BH02G	40	40'	ML	Clayey SILT, dry, red-brown, low plasticity, no odor.
					41			
					42			
					43			
					44			
D	<112	0.6	N	BH02H	45	45'	ML	SAA (Same As Above)
					46			
					47			
					48			



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508 West Stevens Street
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Identifier: BH02

Date: 4/4/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	0.4	N	BH02I	48	50'	ML	Clay & SILT, dry, red-brown, low plasticity, no odor.
					49			
					50			
					51			
					52			
					53			
					54			
D	<112	1.7	N	BH02J	55	55'	ML	SILT, dry, red-light brown, nonplastic, trace red clay, no odor.
					56			
					57			
					58			
					59			
D	<112	1.8	N	BH02K	60	60'	ML	SAA (Same As Above)



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Identifier: BH02

Date: 4/4/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					60			
					61			
					62			
					63			
					64			
D	<112	1.0	N	BH02L	65	65'	ML	SILT, dry, red - light brown, nonplastic, trace red clay, no odor
					66			
					67			
					68			
					69			
D	<112	0.2	N	BH02M	70	70'	ML	clayey SILT, dry, red - brown, low plasticity, trace m. red sand, no odor.
					71			
					72			



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Compliance · Engineering · Remediation

Identifier: BH02

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33536, -103.82751

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 80'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					72			
					73			
					74		CL	Silty CLAY, dry, red-brown, low plasticity, trace brown m. sand, no odor.
D	<112	0.2	N	BH02N	75	75'	CL	
					76			
					77			
					78			
					79			
D	<112	0.2	N	BH02D	80	80'	CL	SAA (Same As Above) ↑ E.O.B. @ 80'
					81			
					82			
					83			
					84			



LT Environmental, Inc.
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Compliance · Engineering · Remediation

Identifier: BH03

Date: 4/5/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82732

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 10'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SAND, dry, brown - light brown, poorly graded, trace roots, no odor
					1			
					2			
					3			
					4		CALICHE	CALICHE, dry, light brown - tan, poorly consolidated, some brown m. sand, no odor.
D	1260	1.0	N	BH03	5	5'		
					6			
					7			
					8			
					9			Sandy SILT, dry, light brown-red, nonplastic, no odor
D	723.2	3.8	N	BH03A	10	10'	ML	
					11			↑ E.O.B. @ 10'
					12			



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 508 West Stevens Street
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Identifier: BH04

Date: 4/5/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82725

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 50'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		SP	SAND, dry, brown - light brown, poorly graded, trace roots, no odor
					1			
					2			
					3			
					4		CALICHE	CALICHE, dry, light brown - tan, poorly consolidated, some brown m. sand, no odor.
D	<112	2.0	N	BH04	5	5'		
					6			
					7			
					8			
					9			Sandy SILT, dry, light brown - red, non plastic, no odor
D	198.4	2.8	N	BH04	10	10'	ML	
					11			
					12			



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Identifier: BH04

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82725

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 50'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13		ML	sandy SILT, dry, red - brown, non plastic, trace red clay, no odor.
					14			
D	320	2.8	N	BH04B	15	15'	ML	SAA (Same As Above)
					16			
					17			
					18			
					19			
D	275.2	4.1	N	BH04C	20	20'	ML	SAA
					21			
					22			
					23			
					24			



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

Identifier: BH04

Date: 4/5/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82725

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 50'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
.D	499.2	3.6	N	BH04D	25	25'	ML	clayey SILT, dry, red-brown, low plasticity, no odor.
					26	Air Rotary 25'-56'		Air Rotary Begins
					27			
					28			
M	2103	1.8	N	BH04E	30	30'	ML	clayey SILT, moist, red-brown, low plasticity, no odor.
					31			
					32			
					33			
					34			
M	276.2	1.4	N	BH04F	35	35'	ML	SAA (Same As Above)
					36			



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

Compliance · Engineering · Remediation

Identifier: BH04

Date: 4/5/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82725

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 50'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
M	<112	2.7	N	BH04G	40	40'	ML	clayey SILT, moist, red-brown, low plasticity, no odor.
					41			
					42			
					43			
					44			
D	<112	4.7	N	BH04H	45	45'	ML	clayey SILT, dry, red-brown, low plasticity, trace brown m. sand, no odor.
					46			
					47			
					48			



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

Compliance · Engineering · Remediation

Identifier: BH04

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33552, -103.82725

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 50'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					48			
					49			
D	<112	13.7	N	BH04-I	50	50'	ML	clayey SILT, dry, med-brown, low plasticity, trace brown m. sand, no odor.
					51			↑ E.O.B. @ 50'
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			



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508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier: BH05

Date: 4/5/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33566, -103.82750

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CALICHE fill	CALICHE, dry, light brown, unconsolidated, trace brown f. Sand, no odor, fill.
					1			
					2		SP	SAND, dry, brown - light brown, poorly graded, trace roots, no odor.
					3			
					4		CALICHE	CALICHE, moist, light brown - tan, moderately consolidated, some light brown m. Sand, no odor.
M	<112	1.7	N	BH05	5	5'		
					6			
					7			
					8			
					9		CALICHE	CALICHE, moist, tan - light brown, moderately well consolidated, trace brown f. Sand, no odor.
M	<112	1.8	N	BH05A	10	10'		
					11			
					12			



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Compliance · Engineering · Remediation

Identifier: BH05

Date: 4/5/19

Project Name:
 JRU 10

RP Number:
 2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33566, -103.82750

Field Screening: CHLORIDES, TPH, BTEX,
 GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14		SP	
					15	15'	SP	Silty SAND, red-brown, moist, poorly graded, n.p., no odor
					16			
					17			
					18			
					19		ML	
					20	20'	ML	clayey SILT, dry, red-brown, nonplastic, no odor,
					21			
					22			
					23			
					24			

M

275

2.9

N

BH05B

D

320

1.2

N

AH05C



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Compliance · Engineering · Remediation

Identifier: BH05

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33566, -103.82750

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
D	<112	1.9	N	BH05D	25	25'	ML	Clayey SILT, dry, red-brown, nonplastic, no odor.
					26			
					27			
					28			
					29			
D	<112	2.9	N	BH05E	30	30'	ML	SAA (Same As Above)
					31			↑ E.O.B @ 30'
					32			
					33			
					34			
					35			
					36			



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Compliance · Engineering · Remediation

Identifier: BH06

Date: 4/5/19

Project Name: JRU 10

RP Number: 2RP-3179, 2RP-3464,
2RP-5243

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33554, -103.82771

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CALICHE	CALICHE, dry, light brown, unconsolidated, trace brown f. sand, no odor, fill.
					1			
					2		SP	SAND, dry, brown - light brown, poorly graded, trace roots, no odor.
					3			
					4		CALICHE	CALICHE, dry, light brown, poorly consolidated, trace light brown m. sand, no odor.
D	556.8	2.0	N	BH06	5	5'		
					6			
					7			
					8			
					9		ML	Sandy SILT, dry, light brown - red, non plasticity, no odor.
D	358	1.9	N	BH06A	10	10'	ML	
					11			
					12			



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Compliance · Engineering · Remediation

Identifier: BH06

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33554, -103.82771

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
D	320	3.9	N	BH06B	15	15'	SP	Silty SAND, dry, red-brown, poorly graded, f.-m., no odor.
					16			
					17			
					18			
					19			
D	454.4	2.5	N	BH06C	20	20'	SP	Silty SAND, dry, light brown-red, poorly graded, f.-m., no odor.
					21			
					22			
					23			
					24			



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Compliance · Engineering · Remediation

Identifier: BH06

Date: 4/5/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method: HOLLOW STEM AUGER

Lat/Long: 32.33554, -103.82771

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 8"

Total Depth: 30'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
D	275.2	4.7	N	BH06D	25	25'	SP	Silty SAND, dry, light brown-red, poorly graded, f.-m., no odor.
					26			
					27			
					28			
					29			
D	236.8	5.2	N	BH06E	30	30'	SP	SAA (Same As Above)
					31			↑ E.O.B. @ 30'
					32			
					33			
					34			
					35			
					36			



LT Environmental, Inc.
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Compliance · Engineering · Remediation

Identifier:

BH07

Date:

5/21/19

Project Name:

JRU 10

RP Number: 2RP-3404, 2RP-3464,
2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: *Soils*

Lat/Long:

32.335562, -103.827565

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:

4"

Total Depth:

60'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D					0		Caliche fill	Caliche, dry, lt bn/tan, pily crsd, no odor, fill
					1			
					2			
					3			
					4			
0925	m	1562	1120	Y	BH07	5	5' (SW-SM)	Silty SAND, moist, red/bn, well graded, f.-s., some caliche gravel. strong petro odor.
					6			
					7			
					8			
					9			
0935	m	1562	1503	Y	BH07A	10	10' (SW-SM)	SAND
					11			
					12			



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Identifier: **BH07**

Date: **5/21/19**

Project Name:
JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:
6.15

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
0940	m	313 ~~1562~~	929	Y	BH07B	15	15' (Sur-Sum)	SAH
					16			
					17			
					18			
					19			
0945	m	1562 313	371	Y	BH07C	20	20'	ML Silt, moist, Red/bn, non plastic, trace red clay, strong Petro odor.
					21			
					22			
					23			
					24			



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Identifier: BH07

Date: 5/21/19

Project Name:
JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:
6.15"

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
1000	211	1570	N	BH07D	25	25'	ML	SAA
					26			
					27			
					28			
					29			
1010	<112	1825	N	BH07E	30	30'	ML	SAA
					31			
					32			
					33			
					34			
1020	<112	236	N	BH07F	35	35'	ML	SAA
					36			



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Identifier: BH07

Date: 5/21/19

Project Name:
JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 6.15"

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
1030	D	2112	121	N	BH07G	40	40' ML	Clayey SILT, dry, bmf/red, non plastic, no odor.
					41			
					42			
					43			
					44			
1050	D	2112	7.6	N	BH07H	45	45' ML	
					46			
					47			
					48			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	18.4	N	BH07I	48	50'	ML	SAT
D	<112	58.1	N	BH07J	55	55'	ML	SHP
D	<112	16.3	N	BH07K	60	60'	ML	SHP



LT Environmental, Inc.
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Compliance · Engineering · Remediation

Identifier:

BH08

Date:

5/21/19

Project Name:

JRU 10

RP Number: 2RP-3404, 2RP-3464,
2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method:

Soils

Lat/Long:

32.35557, -103.827471

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:

6.15"

Total Depth:

74'

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0		CHALKY FINE	CALICHE, dry, tan/ol. brown, poly encls, no odor, fill
					1			
					2			
					3			
					4			
m	1376	1378	Y	BH08	5	5' (SW-SM)		SILT SAND, moist, Red/brown, well graded, A-C, some caliche gravel, strong petro odor.
					6			
					7			
					8			
					9			
m	1376	1475	Y	BH08A	10	10' (SW-SM)		
					11			
					12			



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Compliance · Engineering · Remediation

Identifier: ~~XXXX~~

Date: 5/21/19

Project Name:
JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:
6.15

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					12			
					13			
					14			
1145	m	1376	1178	Y	BH08B	15'	(SW-SM) SPTA	
					16			
					17			
					18			
					19			
1200	m	992	1546	Y	BH08C	20'	(SW-SM) SPTA	
					21			
1210	0	371	2401	N	BH08D	22'	ML	SILT, ~~dry~~ dry, red/bn, non plastic, trace red clay, strong petro odor
					23			
					24			



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Compliance · Engineering · Remediation

Identifier:

B1408

Date:

5/21/19

Project Name:

JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

6.15"

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					24			
1220	0	267	2113	N B1408E	25	25'	ML	S.A.P
					26			
					27			
					28			
					29			
1230	0	<112	2471	N B1408F	30	30'	ML	S.A.A
					31			
					32			
					33			
					34			
1240	0	<180	1087	N B1408G	35	35'	ML	S.M.P
					36			



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508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:

BH08

Date:

5/21/19

Project Name:

JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 6.15"

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					36			
					37			
					38			
					39			
1245	D	<180	3529	N	BH08 H	40	40' ML	SHA
					41			
					42			
					43			
					44			
1255	D	<112	2834	N	BH08 I	45	45' ML	SHA
					46			
					47			
					48			



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Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:
BH08

Date:
5/21/19

Project Name:
JRU 10

RP Number: 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:
6.15"

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					48			
					49			
310	D	6112	2536	N	BH08J	50	50' ML	SVAT
					51			
					52			
					53			
					54			
320	D	6112	1449	N	BH08K	55	55' ML	SVAT
					56			
					57			
					58			
					59			
					60			



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Identifier: BH08

Date: 5/21/19 - 5/22/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment All Chloride test include a 60% error factor.

335
5/22

400

470

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	556	1223	N	BH08L	60	60'	ML	SAA
					61			
					62			
					63			
					64			
D	6180	7.1	N	BH08M	65	65'	ML	SILT w/ clay, dry, lt brn/brn, non-plastic, some red clay, no odor
					66			
					67			
					68			
					69			
D	6112	38.0	N	BH08N	70	70'	ML	SAA
					71			
					72			



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

Compliance · Engineering · Remediation

Identifier:
BH08

Date:
5/22/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					72			
					73			
					74			
					75			
					76			
					77			
					78			
					79			
					80			
					81			
					82			
					83			
					84			

440

D < 12 4.3 N BH080 74' ML SAA

↑
EOB @ 74'



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

Compliance · Engineering · Remediation

Identifier:

MW01

Date:

5/22/19

Project Name:

JRU 10

RP Number: 2RP-3404, 2RP-3464,

2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method: *Soil*

Lat/Long:

32.335339, -103.827697

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:

6.15"

Total Depth:

150'

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	0.5	N	MW01A	0	1'	(SP-SM)	Silty SAND, dry, brn/rd, poorly graded, f.-m., some vegetation.
D	<112	0.4	N	MW01A	2	2'		
D	<112	0.1	N	MW01B	3	3'		
D	<112	0.3	N	MW01C	4	4'	CLICHE	CLICHE w/ Sand, dry, lt brn/rd tan, pily caliche, some m. red sand, no odor.
P	<112	0.1	N	MW01D	5	5'		
D	<112	0.5	N	MW01E	6	6'		
D	<112	0.4	N	MW01F	7	7'		
D	<112	0.3	N	MW01G	8	8'		
D	403	0.1	N	MW01H	9	9'	SP	SAND w/ caliche, dry, lt brn/brn, f.-m., poorly graded, no odor.
D	345	0.8	N	MW01I	10	10'		SAA
D	345	3.1	N	MW01J	11	11'	(SP-SM)	SAND w/ caliche, dry, brn/rd, poorly graded, f.-m., no odor.
					12	12'		



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Identifier ~~XXXX~~
MW01

Date 5/22/19

Project Name:
JRU 10

RP Number 2RP-3464, 2RP-3179
2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO

Hole Diameter:
~~6.00~~

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.6	N	MW01K	12	12'	SP-Sm	STFA
D	<112	3.8	N	MW01L	13	13'		
D	<112	4.9	N	MW01M	14	14'		
D	<112	4.8	N	MW01N	15	15'		
D	<112	1.1	N	MW01O	16	16'		
D	<112	0	N	MW01P	17	17'		
D	<112	4.1	N	MW01Q	18	18'	ML	SILT, dry, ben/ind, no plastic, no odor
D	<112	6.5	N	MW01R	19	19'		
D	<180	1.3	N	MW01S	20	20'		
D	<180	9.2	N	MW01T	21	21'		
D	<112	7.4	N	MW01U	22	22'		
D	<112	5.1	N	MW01V	23	23'		
					24	24'		



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

Compliance · Engineering · Remediation

Identifier:

MWD1

Date:

5/22/19

Project Name:

JRU 10

RP Number: 2RP-3464, 2RP-3179

2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter

Total Depth

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	6.5	N	MWD1 AW	24	24	ML	S4A
D	<112	4.6	N	MWD1 X	25	25'		
D	<112	5.1	N	MWD1 Y	26	26'		
D	<112	9.4	N	MWD1 Z	27	27'		
D	<112	0.8	N	MWD1 AA	28	28		
D	<112	1.2	N	MWD1 AB	29	29		
D	<112	0.9	N	MWD1 AC	30	30		
D	<112	0.8	N	MWD1 AD	31	31		
D	<112	3.0	N	MWD1 AE	32	32		
D	<112	3.1	N	MWD1 AF	33	33		
D	<112	0.0	N	MWD1 AG	34	34		
	<112	0.0	N	MWD1 AH	35	35		
					36			

745



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

Compliance · Engineering · Remediation

Identifier:

MW01

Date:

5/22/14 - 5/23/14

Project Name:

JRU 10

RP Number: 2RP-3464, 2RP-3179

2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELJILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter: 6.15"

Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.0	N	MW01 AF 36	36	36	CL	Silty CLAY, dry, red/bra, low plasticity, no odor.
D	4112	0.0	N	MW01 AJ 37	37	37		
D	<112	1.5	N	MW01 AK 38	38	38		
D	<112	0.0	N	MW01 AL 39	39	39		
D	<112	0.0	N	MW01 AM 40	40	40		
D	<112	0.0	N	MW01 AN 41	41	41		
D	<112	1.4	N	MW01 AO 42	42	42		
D	<112	2.8	N	MW01 AP 43	43	43		
D	<112	1.8	N	MW01 AQ 44	44	44		
D	<112	2.5	N	MW01 AR 45	45	45		
D	<112	1.9	N	MW01 AS 46	46	46		
D	<112	2.0	N	MW01 AT 47	47	47		
					48			

1815

0645



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

Compliance · Engineering · Remediation

Identifier

MW01

Date:

5/23/19

Project Name:

JRU 10

RP Number: 2RP-3464, 2RP-3179

2RP-3243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

6.15"

Total Depth:

Comment: All Chloride test include a 60% error factor.

0730

0745

0740

0750

0800

0810

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	0.3	N	MW01 AW	48	48	CL	silty CLAY, dry, red/bn, low plasticity, no odor
D	<112	1.3	N	MW01 AX	49	49		silty CLAY w/ Caliche, dry, red/bn, low plasticity, some poly coated tan caliche gravel, no odor
D	<112	1.2	N	MW01 AW	50	50		silty CLAY, dry, red/bn, low plasticity, no odor
D	<112	1.2	N	MW01 AX	51	51		
D	<112	1.3	N	MW01 AX	52	52		
D	<112	1.5	N	MW01 AZ	53	53		
D	<112	0.1	N	MW01 BA	54	54		
D	<112	0.3	N	MW01 BB	55	55		
D	<112	2.0	N	MW01 BC	56	56		
D	<112	2.9	N	MW01 BD	57	57		
D	<112	3.8	N	MW01 BE	58	58		
D	<112	2.3	N	MW01 BF	59	59		
					60			



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

Compliance · Engineering · Remediation

Identifier:

MW01

Date:

5/23/19

Project Name:

JRU 10

RP Number:

2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	2.8	N	MW01 BG 60	60	60	CL	Silty CLAY, dry, bind/mud, low plasticity, no odor.
P	<112	2.9	N	MW01 BH 61	61	61		
P	<112	2.8	N	MW01 B I 62	62	62		
D	<112	3.4	N	MW01 B J 63	63	63		
D	<112	1.6	N	MW01 BK 64	64	64		
D	<112	11.7	N	MW01 BL 65	65	65		
P	<112	4.5	N	MW01 BM 66	66	66		
P	<112	3.7	N	MW01 BN 67	67	67		
P	<112	1.9	N	MW01 BQ 68	68	68		
D	<112	1.1	N	MW01 BP 69	69	69		
D	<112	2.3	N	MW01 BQ 70	70	70		
D	<112	1.7	N	MW01 BR 71	71	71		
					72			

0845

0200



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

Compliance · Engineering · Remediation

Identifier: **MW01**

Date: **5/23/19**

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO

Hole Diameter

Total Depth

Comment: All Chloride test include a 60% error factor.

0130

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
P	<112	3.1	N	MW01 BS 72	72	72	CL	Start
b	<112	1.0	N	MW01 BT 73	73	73		
D	<112	1.1	N	MW01 BV 74	74	74		
D	<112	6.0	N	MW01 BV 75	75	75		
D	<112	5.6	N	MW01 BW 76	76	76		
D	<112	3.4	N	MW01 BX 77	77	77		
D	<112	1.1	N	MW01 BY 78	78	78		
P	243	1.2	N	MW01 BZ 79	79	79		
D	<112	2.4	N	MW01 CA 80	80	80		
D	<112	4.7	N	MW01 CB 81	81	81		
D	<112	3.7	N	MW01 CC 82	82	82		
D	<112	3.7	N	MW01 CD 83	83	83		
					84			



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

Compliance · Engineering · Remediation

Identifier:

MW01

Date:

5/23/14

Project Name:

JRU 10

RP Number:

2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	4.9	N	MW01CE	84	84	CL	SLAY
D	<112	1.5	N	MW01CF	85	85		
D	<112	5.3	N	MW01CG	86	86		
D	<112	2.4	N	MW01CH	87	87		
D	<112	1.6	N	MW01CI	88	88		
D	<112	1.1	N	MW01CJ	89	89		
D	<112	0.9	N	MW01CK	90	90		
D	<112	3.6	N	MW01CL	91	91	CL	
D	<112	3.8	N	MW01CM	92	92		
D	<112	1.4	N	MW01CN	93	93		
D	<112	1.2	N	MW01CO	94	94		CL silty SLAY, dry, lt brn/red, low plasticity, no odor.
D	<112	0.8	N	MW01CP	95	95		



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

Compliance · Engineering · Remediation

Identifier:
MW01

Date:
5/23/19

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.4	N	MW01CQ	96	96	CL	silty CLAY, brn/red, low plasticity, no odor.
D	<112	4.2	N	MW01CR	97	97		
D	2112	2.2	N	MW01CS	98	98		
D	<112	1.8	N	MW01CT	99	99		
D	<112	1.1	N	MW01CU	100	100		
D	<112	1.5	N	MW01CV	101	101		
D	2112	0.4	N	MW01CW	102	102		
D	<112	1.1	N	MW01CX	103	103		
D	<112	1.6	N	MW01CY	104	104		
D	<112	0.7	N	MW01CZ	105	105		
	<112	1.3	N	MW01DA	106	106		
	<112	0.6	N	MW01DB	107	107		
					108		V	

1055



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

Compliance · Engineering · Remediation

Identifier: **MW01**

Date: **5/23/19/5/14**

Project Name:
JRU 10

RP Number:
2RP-3179, 2RP-3464, 2RP-5243

LITHOLOGIC / SOIL BORING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, MRO, and DRO.

Hole Diameter:

Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	1.3	N	MW01 D	672108	108	CL	SAA
D	<112	0.3	N	MW01 D	73	109		
D	<112	0.6	N	MW01 D	74	110		
D	<112	0.6	N	MW01 D	75	111		
D	<112	0.5	N	MW01 D	76	112		
D	<112	3.5	N	MW01 D	77	113		
D	<112	5.3	N	MW01 D	78	114		
D	<112	1.3	N	MW01 D	79	115		
D	<112	3.3	N	MW01 D	80	116		
D	<112	2.9	N	MW01 D	81	117		
D	<112	3.3	N	MW01 D	82	118		
D	<112	4.8	N	MW01 D	83	119		

5/29



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

Compliance · Engineering · Remediation

Identifier:
MW01

Date:
5/29/19 - 6/3/19

Project Name:
JRU 10

RP Number: 2RP-3404, 2RP-3464,
2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:
6.15"

Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	<112	3.8	N	~~MW01 D0~~	120	120	CL	SAA
D	<112	3.1	N	~~MW01 D1~~	121	121		
D	<112	1.2	N	~~MW01 D2~~	122	122		
D	<112	0.4	N	MW01 D3	123	123		
D	<112	0.5	N	MW01 D4	124	124		
D	<112	0.6	N	MW01 D5	125	125		
D	<112	0.8	N	MW01 D6	126	126		
D	<112	0.7	N	MW01 D7	127	127		
D	<112	1.0	N	MW01 D8	128	128		
D	<112	0.4	N	MW01 D9	129	129		
D	<112	0.5	N	MW01 D10	130	130		
D	<112	1.1	N	MW01 D11	131	131		
					132			

5/29
6/3
15410
1550



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

Compliance · Engineering · Remediation

Identifier:

MV01

Date:

6/3/19 - 6/4/19

Project Name:

JRU 10

RP Number: 2RP-3404, 2RP-3464,
2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:

6.15"

Total Depth:

Comment: All Chloride test include a 60% error factor.

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0	<112	0.8	N	MWD1EA	132	132	CL	SAND ↓ CLAY w/ gravel, dry, lt brn/red, low plasticity, no odor. ↓ CLAY silty CLAY, brown/red, low plasticity, no odor
0	<112	0.7	N	MWD1EB	133	133		
0	<112	0.8	N	MWD1EC	134	134		
0	<112	0.9	N	MWD1ED	135	135		
0	<112	0.6	N	MWD1EE	136	136		
0	<112	0.7	N	MWD1EF	137	137		
0	<112	1.0	N	MWD1EG	138	138	CL	
0	<112	0.9	N	MWD1EH	139	139		
0	<112	3.8	N	MWD1EI	140	140	CL	
0	<112	3.5	N	MWD1EJ	141	141		
0	<112	3.1	N	MWD1EK	142	142		
0	<112	1.8	N	MWD1EL	143	143		
					144			



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

Compliance · Engineering · Remediation

Identifier: MW01

Date: 6/1/19

Project Name:
JRU 10

RP Number 2RP-3404, 2RP-3464,
2RP-3179

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: BEN BELILL

Method:

Lat/Long:

Field Screening: CHLORIDES, TPH, BTEX,
GRO, DRO, and MRO.

Hole Diameter:
6.15"

Total Depth:

Comment: All Chloride test include a 60% error factor.

	Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
0930	0	<112	3.5	N	MW01 E M	144	CL	5/1/19	
0935	0	<112	3.2	N	MW01 E N	145			
0940	0	<112	2.7	N	MW01 E O	146			
0945	0	<112	3.1	N	MW01 E 8	147			
0950	0	<112	3.0	N	MW01 E Q	148			
0955	0	<112	1.8	N	MW01 E R	149			
1000	0	<112	1.5	N	MW01 E S	150			
						7			FOR @ 150'
						8			
						9			
						10			
						11			
						12			

FOR @ 150'





Former James Ranch Unit #10 tank battery location

Project: 012918003	XTO Energy, Inc. James Ranch Unit #10 Battery	 <i>Advancing Opportunity</i>
June 28, 2019	Photographic Log	



View of open excavation

Project: 012918003	XTO Energy, Inc. James Ranch Unit #10 Battery	 <i>Advancing Opportunity</i>
June 28, 2019	Photographic Log	



View of open excavation

Project: 012918003	XTO Energy, Inc. James Ranch Unit #10 Battery	 <i>Advancing Opportunity</i>
June 28, 2019	Photographic Log	



Installation of 30-mil poly liner over excavation extent

Project: 012918003	XTO Energy, Inc. James Ranch Unit #10 Battery	 <i>Advancing Opportunity</i>
June 28, 2019	Photographic Log	