

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    | NCS2003539060 |
| District RP    |               |
| Facility ID    |               |
| Application ID |               |

## Release Notification

### Responsible Party

|                         |                                   |                              |               |
|-------------------------|-----------------------------------|------------------------------|---------------|
| Responsible Party       | XTO Energy                        | OGRID                        | 5380          |
| Contact Name            | Kyle Littrell                     | Contact Telephone            | 432-221-7331  |
| Contact email           | Kyle_Littrell@xtoenergy.com       | Incident # (assigned by OCD) | NCS2003539060 |
| Contact mailing address | 522 W. Mermod, Carlsbad, NM 88220 |                              |               |

### Location of Release Source

Latitude 32.499101 Longitude -103.263898  
(NAD 83 in decimal degrees to 5 decimal places)

|                         |              |                      |                                               |
|-------------------------|--------------|----------------------|-----------------------------------------------|
| Site Name               | EMSU WSW 278 | Site Type            | Well Location                                 |
| Date Release Discovered | 12/23/2019   | API# (if applicable) | 30-025-20133 (Eunice Monument South Unit 278) |

| Unit Letter | Section | Township | Range | County |
|-------------|---------|----------|-------|--------|
| A           | 9       | 21S      | 36E   | LEA    |

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

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

|                                                    |                                                                                |                                                          |
|----------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> Crude Oil      | Volume Released (bbls) 3.97                                                    | Volume Recovered (bbls) 1.0                              |
| <input checked="" type="checkbox"/> Produced Water | Volume Released (bbls) 165.49                                                  | Volume Recovered (bbls) 20.0                             |
|                                                    | Is the concentration of dissolved chloride in the produced water >10,000 mg/l? | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Condensate                | Volume Released (bbls)                                                         | Volume Recovered (bbls)                                  |
| <input type="checkbox"/> Natural Gas               | Volume Released (Mcf)                                                          | Volume Recovered (Mcf)                                   |
| <input type="checkbox"/> Other (describe)          | Volume/Weight Released (provide units)                                         | Volume/Weight Recovered (provide units)                  |

Cause of Release: Flowline leak was discovered. It was determined a transition fitting had internal corrosion. Well was shut in until repairs were made. This resulted in a release of approximately 3.97 bbls of oil and 165.49 bbls of produced water, recovered approximately 1.0 bbl of oil and 20 bbls of produced water. Additional third party resources have been retained to assist in the remediation.

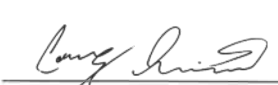
State of New Mexico  
Oil Conservation Division

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|                                                                                                                                                                                                                                                                             |                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Was this a major release as defined by 19.15.29.7(A) NMAC?<br><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                                       | If YES, for what reason(s) does the responsible party consider this a major release?<br><br>YES – An unauthorized release of fluid over 25 barrels. |
| If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?<br>YES, by Bryan Foust : rmann@slo.state.nm.us; camorgan@blm.gov; emnrd-ocd-district1spills@state.nm.us;<br>EMNRD Griswold Jim on December 23, 2019 at 3:17pm. |                                                                                                                                                     |

**Initial Response**

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> The source of the release has been stopped.<br><input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.<br><input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.<br><input checked="" type="checkbox"/> 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:<br><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   |
| Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.                                                                                                                                                                                                                                                                                                                                                                                      |                                   |
| I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. |                                   |
| Printed Name: <u>Kyle Littrell</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Title: <u>SH&amp;E Supervisor</u> |
| Signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Date: <u>1/6/2020</u>             |
| email: <u>Kyle_Littrell@xtoenergy.com</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Telephone: _____                  |
| <b>OCD Only</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                   |
| Received by:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date: <u>2/4/2020</u>             |

|                                          |                     |         |
|------------------------------------------|---------------------|---------|
| <b>Location:</b>                         | <b>EMSU WSW 278</b> |         |
| <b>Spill Date:</b>                       | <b>12/23/2019</b>   |         |
| <b>Area #1</b>                           |                     |         |
| Approximate Area =                       | 1130.36             | sq. ft. |
| Average Saturation (or depth) of spill = | 4.00                | inches  |
|                                          |                     |         |
| Approximate oil % =                      | 2.00                |         |
| Average Porosity Factor =                | 3.00                | %       |
| <b>VOLUME OF LEAK</b>                    |                     |         |
| Total Oil =                              | 0.13                | bbls    |
| Total Produced Water =                   | 5.90                | bbls    |
| <b>Area #2</b>                           |                     |         |
| Approximate Area =                       | 3983.00             | sq. ft. |
| Average Saturation (or depth) of spill = | 10.00               | inches  |
|                                          |                     |         |
| Approximate oil % =                      | 2.00                |         |
| Average Porosity Factor =                | 20.00               | %       |
|                                          |                     |         |
| <b>VOLUME OF LEAK</b>                    |                     |         |
| Total Oil =                              | 2.84                | bbls    |
| Total Produced Water =                   | 139.59              | bbls    |
| <b>TOTAL VOLUME OF LEAK</b>              |                     |         |
| Total Oil =                              | 3.97                | bbls    |
| Total Produced Water =                   | 165.49              | bbls    |
| <b>TOTAL VOLUME RECOVERED</b>            |                     |         |
| Total Oil =                              | 1.00                | bbls    |
| Total Produced Water =                   | 20.00               | bbls    |

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## Site Assessment/Characterization

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

|                                                                                                                                                                                                 |                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| What is the shallowest depth to groundwater beneath the area affected by the release?                                                                                                           | ( <u>&gt;100</u> ) (ft bgs)                                         |
| Did this release impact groundwater or surface water?                                                                                                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?                                                           | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within 300 feet of a wetland?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying a subsurface mine?                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release overlying an unstable area such as karst geology?                                                                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Are the lateral extents of the release within a 100-year floodplain?                                                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?                                                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

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

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

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

|                |               |
|----------------|---------------|
| Incident ID    | NRM2004956954 |
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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.

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

Printed Name: \_\_\_\_\_ Kyle Littrell \_\_\_\_\_ Title: \_\_\_\_\_ SH&E Coordinator \_\_\_\_\_

Signature: \_\_\_\_\_  \_\_\_\_\_ Date: \_\_\_\_\_ 04/09/2020 \_\_\_\_\_

email: \_\_\_\_\_ Kyle\_Littrell@xtoenergy.com \_\_\_\_\_ Telephone: \_\_\_\_\_ (432)-221-7331 \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

|                |               |
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## Closure

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

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

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 04/09/2020

email: Kyle\_Littrell@xtoenergy.com Telephone: 432-221-7331

### OCD Only

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



LT Environmental, Inc.

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

April 9, 2020

New Mexico Oil Conservation Division  
District I  
1625 North French Drive  
Hobbs, New Mexico 88240

**RE: Closure Request  
EMSU WSW 278  
Incident Number NCS2003539060  
Lea County, New Mexico**

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Eunice Monument South Unit (EMSU) WSW 278 (Site) located in Unit A, Section 9, Township 21, South Range 36 East, in Lea County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of crude oil and produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Closure Request and requesting no further action (NFA) for the release associated with Incident Number NCS2003539060.

## RELEASE BACKGROUND

On December 23, 2019, a transition fitting failed due to internal corrosion, which resulted in the release approximately of 3.97 barrels (bbls) of crude oil and approximately 165.49 bbls of produced water onto the caliche pad and into the pasture area to the west of the caliche pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids; approximately 1.0 bbl of crude oil and approximately 20.0 bbls of produced water were recovered. XTO immediately reported the release via email on December 23, 2019. XTO submitted a Release Notification and Corrective Action Form C-141 (Form C-141) to the New Mexico Oil Conservation Division (NMOCD) on January 6, 2020, and the release was subsequently assigned Incident Number NCS2003539060.

## SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest groundwater well data. The nearest permitted groundwater well with depth to groundwater data is New Mexico well CP 00692, located approximately 1,078



feet southeast of the Site. The groundwater well has a depth to groundwater of 195 feet bgs. Ground surface elevation at the groundwater well location is 3,603 feet above mean sea level (amsl), which is approximately seven foot higher in elevation than the Site. A United States Geological Survey (USGS) well 322952103154001 was reportedly located 785 feet to the northeast of the release, with a depth to water of approximately 200 feet bgs. LTE conducted a 1,000-foot radius pedestrian survey in the location of the well to confirm the presence or absence of this well. The well is no longer present and is believed to be abandoned.

The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash, located approximately 1,033 feet north-northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology (low potential karst designation area). The Site receptors are depicted on Figure 1.

## CLOSURE CRITERIA

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

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

Additionally, the reclamation standard of 600 mg/kg chloride was applied to the undeveloped pasture that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top four feet for areas to be reclaimed following remediation.

## SITE ASSESSMENT AND DELINEATION ACTIVITIES

On January 21 and January 29, 2020, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected nine preliminary soil samples (SS01 through SS09) from within the release extent from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips,



respectively. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

Additionally, on January 29, 2020, LTE personnel was at the Site to oversee delineation soil assessment activities. Four potholes (PH01 through PH04) were advanced via backhoe, to a depth of approximately 1 foot to 5 feet bgs, within the release extent. Field screening results and observations for each delineation soil sample were documented on lithologic/soil sampling logs and are included as Attachment 1. All potholes were backfilled with the soil removed. The borehole and delineation soil sample locations are depicted on Figure 3.

The preliminary and delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on visual observations and the laboratory analytical results for the preliminary and delineation soil samples, excavation of impacted soil appeared to be warranted both on the caliche well pad and in the pasture area to the west of the caliche well pad. Laboratory analytical results for the preliminary and delineation soil samples are presented on Figure 2 and Figure 3 and summarized in Table 1.

## EXCAVATION AND SOIL SAMPLING ACTIVITIES

From January 30 through March 30, 2020, LTE returned to the Site to oversee excavation activities to remediate impacted soil and to remove waste containing soil in the pasture as indicated by visual observations and laboratory analytical results for the preliminary and delineation soil samples. Excavation activities occurred in two main areas: in the northwestern portion of the caliche pad and in the pasture area to the west of the caliche pad.

Excavation activities began in the northwestern portion of the caliche pad to address the surficial staining left by the release. Soil in this area was excavated to a depth of approximately 0.5 feet bgs via a grader. These excavations measured approximately 6,590 square feet in area, and approximately 122 cubic yards of impacted soil were removed from this area.

Impacted soil in the pasture area to the west of the caliche pad was excavated via track-mounted backhoe and hydrovacuum. Soil in this area was excavated to a depth of approximately 4 feet bgs. The pasture excavations measured approximately 4,635 square feet in area, and approximately 687 cubic yards of impacted soil were removed from this area.



Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Soil from the confirmation floor and sidewall samples were field screened for volatile aromatic hydrocarbons and chlorides utilizing a PID and Hach® chloride QuanTab® test strips, respectively. A total of 61 composite soil samples were collected from the floor and sidewalls of the excavation. Floor samples were collected at a depth of approximately 4 feet bgs, and sidewall samples were collected at depths ranging between the ground surface to approximately 4 feet bgs. The excavation soil samples were collected, handled, and analyzed as described above by Xenco in Midland, Texas. The locations of the final excavation extents and excavation soil samples are presented on Figure 4.

The combined excavation extents measured a total of approximately 11,225 square feet in area. A total of approximately 809 cubic yards of impacted soil was removed from the Site during excavation activities. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico. Following the completion of excavation activities and confirmation soil sampling, the excavation was backfilled and re-contoured to match pre-existing conditions. Photograph documentation was conducted during remediation activities and a photographic log is included in Attachment 2.

## ANALYTICAL RESULTS

Laboratory analytical results indicated that benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with Closure Criteria in all preliminary, delineation and excavation soil samples collected at the Site; however, preliminary soil samples SS01 and SS09, delineation soil samples PH03/PH03A and PH04/PH04A, and excavation soil samples SW02, SW04, SW10, SW12, and SW13, collected at depths ranging from the ground surface to approximately 4 feet bgs, exceeded the 600 mg/kg chloride concentration reclamation standard for waste containing soil in the top 4 feet. In order to address these exceedances, further excavation of impacted soil in the pasture area to the west of the caliche well pad appeared to be warranted. Additional excavation activities occurred, and confirmation soil samples SW14, SW15, SW16 confirm the absence of waste containing soil in the areas of samples SW02, SW04, SW10, SW12, and SW13.

Laboratory analytical results are presented on Figure 2 and Figure 3 and are summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

## CONCLUSIONS

Approximately 809 cubic yards of impacted soil was excavated from the site and all identified elevated concentrations of benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chlorides was removed. All preliminary soil samples, delineation pothole samples, and confirmation floor and sidewall



District I  
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samples were collected from within the release extent from depths ranging from 0.5 feet to 4 feet bgs to assess for the presence or absence of soil impacts as a result of the produced water and crude oil release on December 23, 2019. Laboratory analytical results for all confirmation soil samples indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and with the reclamation standard for areas to be reclaimed. In addition, XTO removed surficial soil stained by the release.

Based on initial response efforts, removal of impacted and waste containing soil, and laboratory analytical results, XTO requests NFA for Incident Number NCS2003539060.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Kaleb Henry  
Staff Geologist

Ashley L. Ager, P.G.  
Senior Geologist

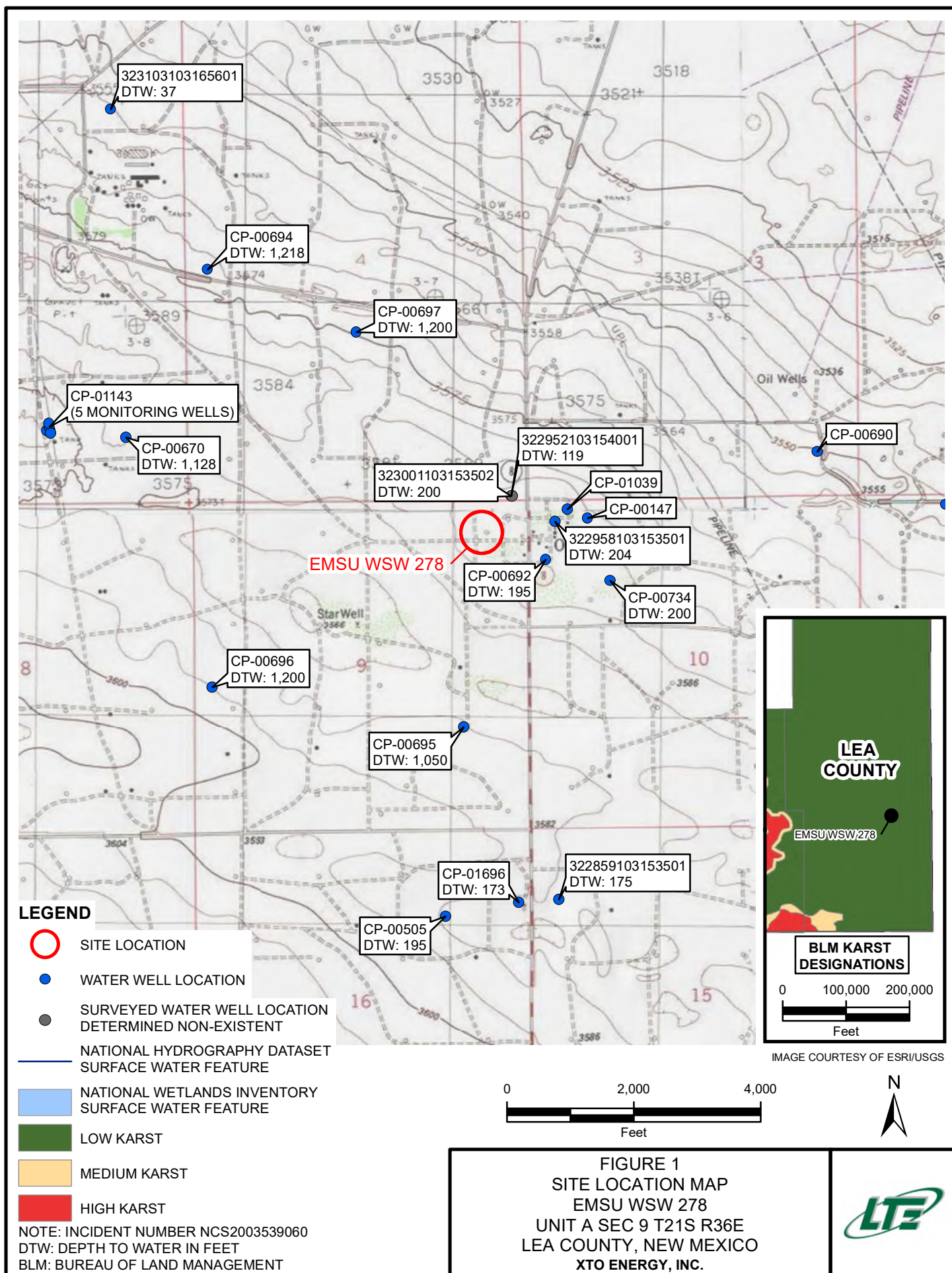
cc: Kyle Littrell, XTO  
Robert Hamlet, NMOCD  
Victoria Venegas, NMOCD

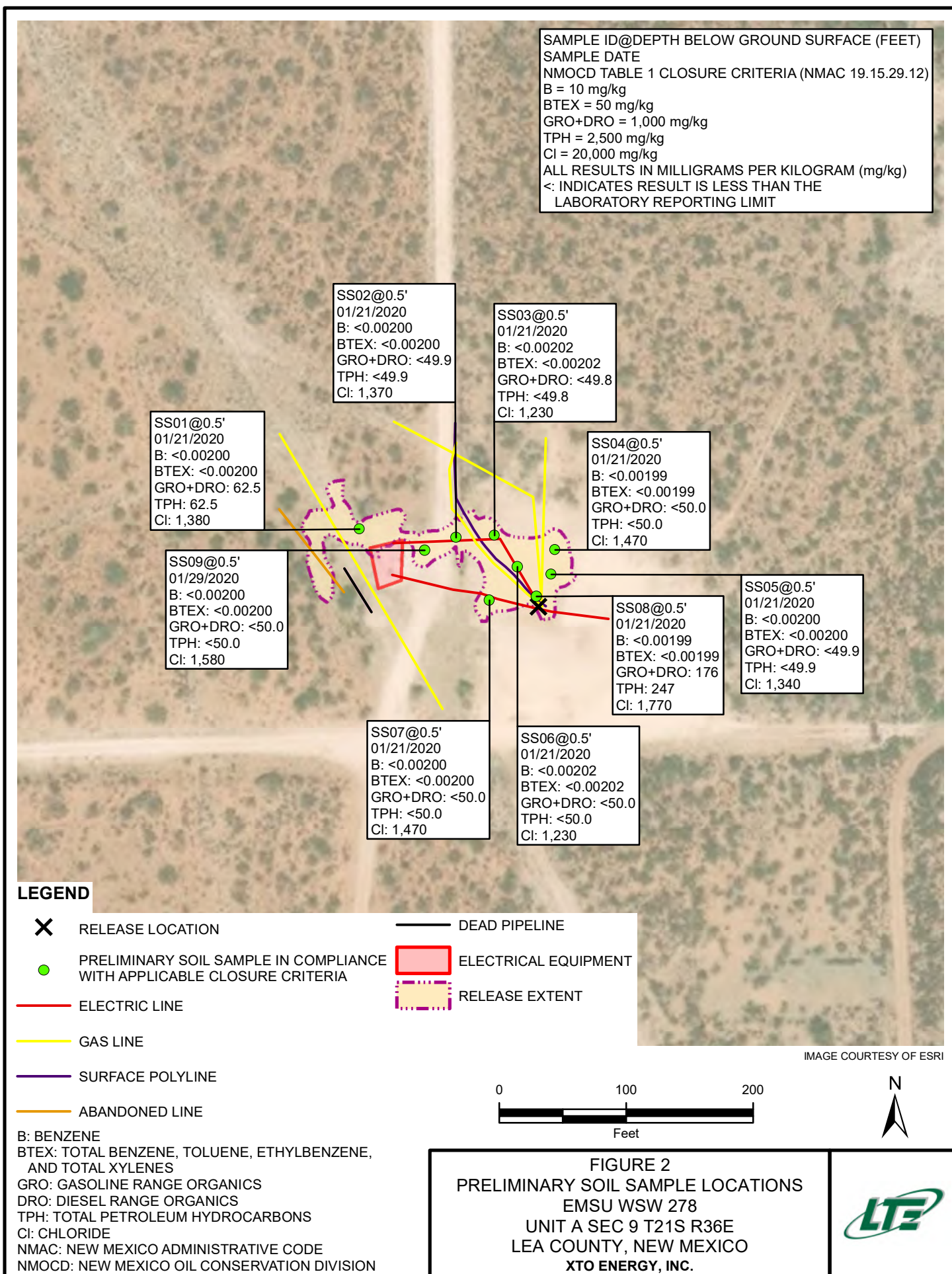
Attachments:

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

FIGURES







SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)  
 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

|                |                |
|----------------|----------------|
| PH03@1'        | PH03A@2.5'     |
| 01/29/2020     | 01/29/2020     |
| B: <0.00198    | B: <0.00200    |
| BTEX: <0.00198 | BTEX: <0.00200 |
| GRO+DRO: 651   | GRO+DRO: 440   |
| TPH: 876       | TPH: 564       |
| Cl: 987        | Cl: 834        |

|                |                |
|----------------|----------------|
| PH02@1'        | PH02A@3'       |
| 01/29/2020     | 01/29/2020     |
| B: <0.00200    | B: <0.00200    |
| BTEX: <0.00200 | BTEX: <0.00200 |
| GRO+DRO: <50.2 | GRO+DRO: <50.2 |
| TPH: <50.2     | TPH: <50.2     |
| Cl: 1,020      | Cl: 1,110      |

|                |                |
|----------------|----------------|
| PH01@1'        | PH01A@3'       |
| 01/29/2020     | 01/29/2020     |
| B: <0.00200    | B: <0.00200    |
| BTEX: <0.00200 | BTEX: <0.00200 |
| GRO+DRO: <50.3 | GRO+DRO: 62.5  |
| TPH: <50.3     | TPH: 62.5      |
| Cl: 235        | Cl: 2,130      |

|                |                |                |
|----------------|----------------|----------------|
| PH04@1'        | PH04A@4'       | PH04B@5'       |
| 01/29/2020     | 01/29/2020     | 01/29/2020     |
| B: <0.00198    | B: <0.00198    | B: <0.00198    |
| BTEX: <0.00198 | BTEX: <0.00198 | BTEX: <0.00198 |
| GRO+DRO: <50.2 | GRO+DRO: <49.9 | GRO+DRO: <49.9 |
| TPH: <50.2     | TPH: <49.9     | TPH: <49.9     |
| Cl: 1,240      | Cl: 1,180      | Cl: 1,320      |

**LEGEND**

- |                                                                                     |                                                                          |                                                                                     |                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------|
|  | RELEASE LOCATION                                                         |  | DEAD PIPELINE        |
|  | DELINATION SOIL SAMPLE IN COMPLIANCE<br>WITH APPLICABLE CLOSURE CRITERIA |  | ELECTRICAL EQUIPMENT |
|  | ELECTRIC LINE                                                            |  | RELEASE EXTENT       |
|  | GAS LINE                                                                 |                                                                                     |                      |
|  | SURFACE POLYLINE                                                         |                                                                                     |                      |
|  | ABANDONED LINE                                                           |                                                                                     |                      |

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

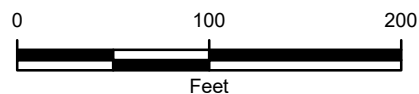


IMAGE COURTESY OF ESRI



**FIGURE 3**  
 DELINEATION SOIL SAMPLE LOCATIONS  
 EMSU WSW 278  
 UNIT A SEC 9 T21S R36E  
 LEA COUNTY, NEW MEXICO  
 XTO ENERGY, INC.



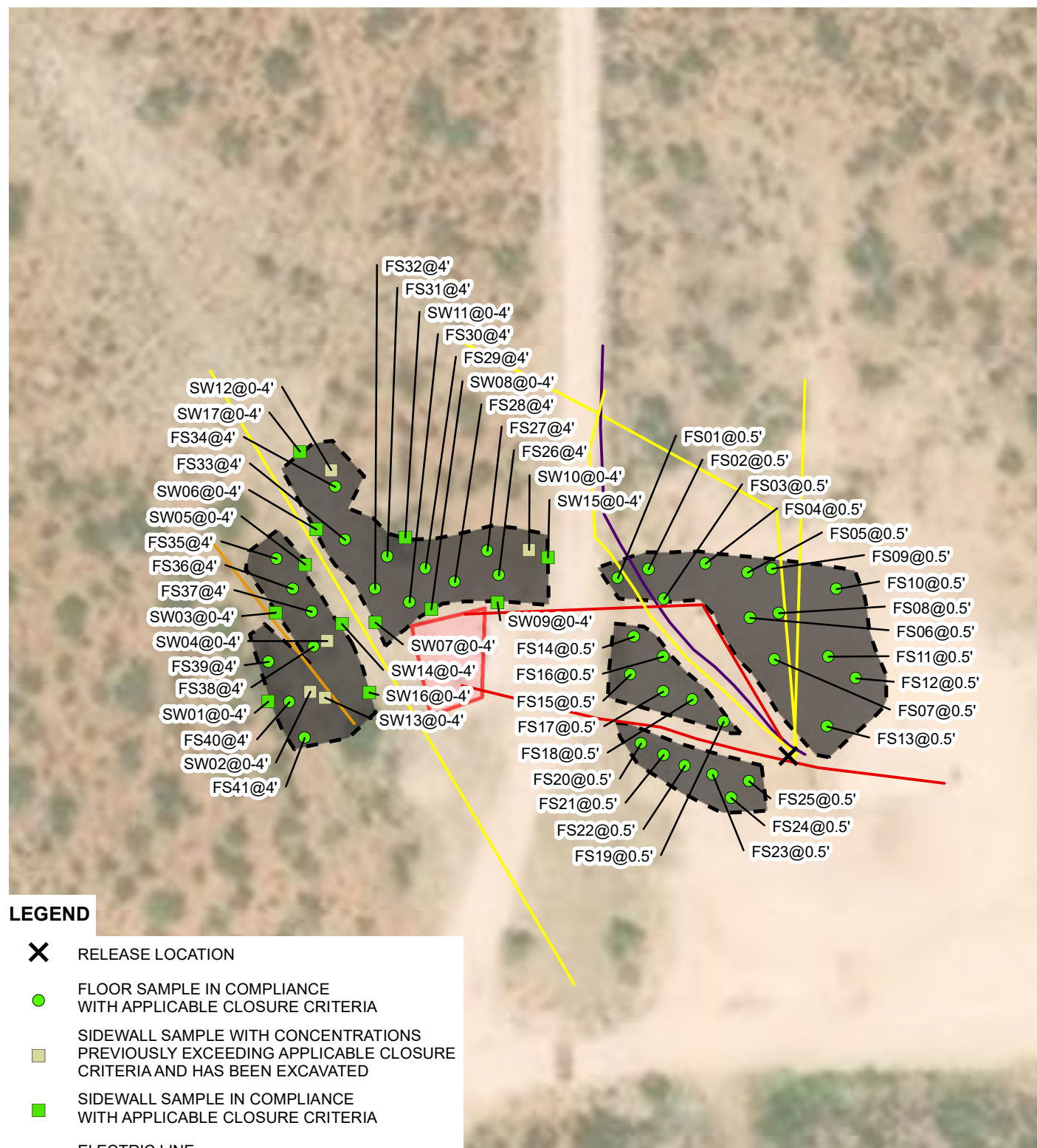
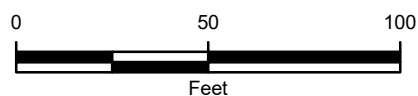


IMAGE COURTESY OF ESRI



**FIGURE 4**  
**EXCAVATION SOIL SAMPLE LOCATIONS**  
 EMSU WSW 278  
 UNIT A SEC 9 T21S R36E  
 LEA COUNTY, NEW MEXICO  
 XTO ENERGY, INC.



TABLES



**TABLE 1  
SOIL ANALYTICAL RESULTS**

**EMSU WSW 278  
INCIDENT NUMBER NCS2003539060  
LEA COUNTY, NEW MEXICO  
XTO ENERGY, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| <b>NMOCD Table 1 Closure Criteria</b> |                         |             | <b>10</b>       | <b>NE</b>       | <b>NE</b>             | <b>NE</b>             | <b>50</b>          | <b>NE</b>   | <b>NE</b>   | <b>NE</b>   | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |
| SS01                                  | 0.5                     | 01/21/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 62.5        | <50.0       | 62.5                  | 62.5         | <b>1,380*</b>    |
| SS02                                  | 0.5                     | 01/21/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 1,370            |
| SS03                                  | 0.5                     | 01/21/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 1,230            |
| SS04                                  | 0.5                     | 01/21/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 1,470            |
| SS05                                  | 0.5                     | 01/21/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 1,340            |
| SS06                                  | 0.5                     | 01/21/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 1,230            |
| SS07                                  | 0.5                     | 01/21/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 1,470            |
| SS08                                  | 0.5                     | 01/21/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | 176         | 70.8        | 176                   | 247          | 1,770            |
| SS09                                  | 0.5                     | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | <b>1,580*</b>    |
| PH01                                  | 1                       | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.3       | <50.3       | <50.3       | <50.3                 | <50.3        | 235              |
| PH01A                                 | 3                       | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | 62.5        | <49.9       | 62.5                  | 62.5         | 2,130            |
| PH02                                  | 1                       | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 1,020            |
| PH02A                                 | 3                       | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 1,110            |
| PH03                                  | 1                       | 01/29/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.2       | 651         | 225         | 651                   | 876          | <b>987*</b>      |
| PH03A                                 | 2.5                     | 01/29/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 440         | 124         | 440                   | 564          | <b>834*</b>      |
| PH04                                  | 1                       | 01/29/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | <b>1,240*</b>    |
| PH04A                                 | 4                       | 01/29/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | <b>1,180*</b>    |
| PH04B                                 | 5                       | 01/29/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 1,320            |
| FS01                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.1       | <50.1       | <50.1       | <50.1                 | <50.1        | 1,130            |
| FS02                                  | 0.5                     | 01/31/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 1,290            |
| FS03                                  | 0.5                     | 01/31/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 834              |
| FS04                                  | 0.5                     | 01/31/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.8       | 140         | 78.1        | 140                   | 218          | 1,420            |
| FS05                                  | 0.5                     | 01/31/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | 50.3        | <50.0       | 50.3                  | 50.3         | 1,980            |
| FS06                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 71.3        | 70.3        | 71.3                  | 142          | 852              |
| FS07                                  | 0.5                     | 01/31/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 933              |



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

**EMSU WSW 278**  
**INCIDENT NUMBER NCS2003539060**  
**LEA COUNTY, NEW MEXICO**  
**XTO ENERGY, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| <b>NMOCD Table 1 Closure Criteria</b> |                         |             | <b>10</b>       | <b>NE</b>       | <b>NE</b>             | <b>NE</b>             | <b>50</b>          | <b>NE</b>   | <b>NE</b>   | <b>NE</b>   | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |
| FS08                                  | 0.5                     | 01/31/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.1       | 78.6        | <50.1       | 78.6                  | 78.6         | 758              |
| FS09                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.2       | 97.6        | <50.2       | 97.6                  | 97.6         | 1,120            |
| FS10                                  | 0.5                     | 01/31/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | 66.7        | <49.9       | 66.7                  | 66.7         | 684              |
| FS11                                  | 0.5                     | 01/31/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 911              |
| FS12                                  | 0.5                     | 01/31/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 1,960            |
| FS13                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.3       | 52.6        | <50.3       | 52.6                  | 52.6         | 2,640            |
| FS14                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 796              |
| FS15                                  | 0.5                     | 01/31/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.3       | 166         | <50.3       | 166                   | 166          | 387              |
| FS16                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 1,350            |
| FS17                                  | 0.5                     | 01/31/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.8       | 118         | <49.8       | 118                   | 118          | 803              |
| FS18                                  | 0.5                     | 01/31/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 646              |
| FS19                                  | 0.5                     | 01/31/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.3       | 59.6        | <50.3       | 59.6                  | 59.6         | 1,060            |
| FS20                                  | 0.5                     | 01/31/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 647              |
| FS21                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 799              |
| FS22                                  | 0.5                     | 01/31/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.1       | <50.1       | <50.1       | <50.1                 | <50.1        | 599              |
| FS23                                  | 0.5                     | 01/31/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.2       | 71.7        | <50.2       | 71.7                  | 71.7         | 813              |
| FS24                                  | 0.5                     | 01/31/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <50.2       | <50.2       | <50.2       | <50.2                 | <50.2        | 2,910            |
| FS25                                  | 0.5                     | 01/31/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | 73.3        | <49.9       | 73.3                  | 73.3         | 2,790            |
| FS26                                  | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 76.4        | <50.0       | 76.4                  | 76.4         | 1,010            |
| FS27                                  | 4                       | 02/07/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 191              |
| FS28                                  | 4                       | 02/07/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | 192         | 106         | 192                   | 298          | 947              |
| FS29                                  | 4                       | 02/07/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | 279         | 149         | 279                   | 428          | 481              |
| FS30                                  | 4                       | 02/07/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <49.9       | 590         | 266         | 590                   | 856          | 836              |
| FS31                                  | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 652         | 270         | 652                   | 922          | 779              |
| FS32                                  | 4                       | 02/07/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <50.0       | 128         | 66.2        | 128                   | 194          | 982              |



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

**EMSU WSW 278**  
**INCIDENT NUMBER NCS2003539060**  
**LEA COUNTY, NEW MEXICO**  
**XTO ENERGY, INC.**

| Sample Name                          | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|--------------------------------------|-------------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| <b>NMOC Table 1 Closure Criteria</b> |                         |             | <b>10</b>       | <b>NE</b>       | <b>NE</b>             | <b>NE</b>             | <b>50</b>          | <b>NE</b>   | <b>NE</b>   | <b>NE</b>   | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |
| FS33                                 | 4                       | 02/07/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 612              |
| FS34                                 | 4                       | 02/07/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 753              |
| FS35                                 | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 355              |
| FS36                                 | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 668              |
| FS37                                 | 4                       | 02/07/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 639              |
| FS38                                 | 4                       | 02/07/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 519              |
| FS39                                 | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 888              |
| FS40                                 | 4                       | 02/07/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 944              |
| FS41                                 | 4                       | 02/07/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 441              |
| SW01                                 | 0 - 4                   | 03/05/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 280*             |
| SW02                                 | 0 - 4                   | 03/05/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 1,390*           |
| SW03                                 | 0 - 4                   | 03/05/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 252*             |
| SW04                                 | 0 - 4                   | 03/05/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.8       | <49.8       | <49.8       | <49.8                 | <49.8        | 796*             |
| SW05                                 | 0 - 4                   | 03/05/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 157*             |
| SW06                                 | 0 - 4                   | 03/05/2020  | <0.00201        | <0.00201        | <0.00201              | <0.00201              | <0.00201           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 440*             |
| SW07                                 | 0 - 4                   | 03/05/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 201*             |
| SW08                                 | 0 - 4                   | 03/05/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <49.8       | 154         | 62.3        | 154                   | 216          | 536*             |
| SW09                                 | 0 - 4                   | 03/05/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | 63.4        | <50.0       | 63.4                  | 63.4         | 430*             |
| SW10                                 | 0 - 4                   | 03/05/2020  | <0.00202        | <0.00202        | <0.00202              | <0.00202              | <0.00202           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 707*             |
| SW11                                 | 0 - 4                   | 03/05/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 36.7*            |
| SW12                                 | 0 - 4                   | 03/05/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 912*             |
| SW13                                 | 0 - 4                   | 03/23/2020  | <0.00198        | <0.00198        | <0.00198              | <0.00198              | <0.00198           | <49.9       | <49.9       | <49.9       | <49.9                 | <49.9        | 1,030*           |



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**TABLE 1  
SOIL ANALYTICAL RESULTS**

**EMSU WSW 278  
INCIDENT NUMBER NCS2003539060  
LEA COUNTY, NEW MEXICO  
XTO ENERGY, INC.**

| Sample Name                           | Sample Depth (feet bgs) | Sample Date | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | Total BTEX (mg/kg) | GRO (mg/kg) | DRO (mg/kg) | ORO (mg/kg) | Total GRO+DRO (mg/kg) | TPH (mg/kg)  | Chloride (mg/kg) |
|---------------------------------------|-------------------------|-------------|-----------------|-----------------|-----------------------|-----------------------|--------------------|-------------|-------------|-------------|-----------------------|--------------|------------------|
| <b>NMOCD Table 1 Closure Criteria</b> |                         |             | <b>10</b>       | NE              | NE                    | NE                    | <b>50</b>          | NE          | NE          | NE          | <b>1,000</b>          | <b>2,500</b> | <b>20,000</b>    |
| SW14                                  | 0 - 4                   | 03/23/2020  | <0.00199        | <0.00199        | <0.00199              | <0.00199              | <0.00199           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 37.2*            |
| SW15                                  | 0 - 4                   | 03/23/2020  | <0.00200        | <0.00200        | <0.00200              | <0.00200              | <0.00200           | <50.0       | <50.0       | <50.0       | <50.0                 | <50.0        | 48.9*            |
| SW16                                  | 0 - 4                   | 03/30/2020  | N/A             | N/A             | N/A                   | N/A                   | N/A                | N/A         | N/A         | N/A         | N/A                   | N/A          | 147*             |
| SW17                                  | 0 - 4                   | 04/02/2020  | N/A             | N/A             | N/A                   | N/A                   | N/A                | N/A         | N/A         | N/A         | N/A                   | N/A          | 12.6             |

**Notes:**

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

**Bold** - indicates result exceeds the applicable regulatory standard

&lt; - indicates result is below laboratory reporting limits

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

N/A - indicates sample was not analyzed for this constituent

\* - 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



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ATTACHMENT 1: LITHOLOGIC / SOIL SAMPLE LOGS

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                |             |                                         |          | Identifier:<br>PH01 |                | Date:<br>1/29/2020 |                                                                                    |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|-----------------------------------------|----------|---------------------|----------------|--------------------|------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                    |                |             |                                         |          | EMSU WSW 278        |                |                    |                                                                                    |  |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |             |                                         |          | Logged By: WM       |                | Method: Trackhoe   |                                                                                    |  |
| Lat/Long:                                                                                                                                                                                                          |                |             | Field Screening:<br>Chloride, TPH, BTEX |          |                     | Hole Diameter: |                    | Total Depth:<br>3'                                                                 |  |
| Comments:                                                                                                                                                                                                          |                |             |                                         |          |                     |                |                    |                                                                                    |  |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm) | Staining                                | Sample # | Depth (ft. bgs.)    | Sample Depth   | Soil/Rock Type     | Lithology/Remarks                                                                  |  |
| dry                                                                                                                                                                                                                | <120           | 0.8         | n                                       | PH01     | 1                   | 1'             | SM                 | SAND, brown, dry, well graded, medium - fine grained, some silt, no odor, no stain |  |
| dry                                                                                                                                                                                                                | 778.4          | 0.3         | n                                       | PH01A    | 2                   | 2'             | SM                 |                                                                                    |  |
| dry                                                                                                                                                                                                                | 436.8          | 0.1         | n                                       | PH01B    | 3                   | 3'             | SM                 |                                                                                    |  |
|                                                                                                                                                                                                                    |                |             |                                         |          |                     |                |                    | Total Depth 3 feet bgs                                                             |  |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                |             |                                         |          | Identifier:<br>PH02 |                | Date:<br>1/29/2020 |                                                                                    |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|-----------------------------------------|----------|---------------------|----------------|--------------------|------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                    |                |             |                                         |          | EMSU WSW 278        |                |                    |                                                                                    |  |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |             |                                         |          | Logged By: WM       |                | Method: Trackhoe   |                                                                                    |  |
| Lat/Long:                                                                                                                                                                                                          |                |             | Field Screening:<br>Chloride, TPH, BTEX |          |                     | Hole Diameter: |                    | Total Depth:<br>3'                                                                 |  |
| Comments:                                                                                                                                                                                                          |                |             |                                         |          |                     |                |                    |                                                                                    |  |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm) | Staining                                | Sample # | Depth (ft. bgs.)    | Sample Depth   | Soil/Rock Type     | Lithology/Remarks                                                                  |  |
| dry                                                                                                                                                                                                                | 1,187.2        | 0.4         | n                                       | PH02     | 1                   | 1'             | SM                 | SAND, brown, dry, well graded, medium - fine grained, some silt, no odor, no stain |  |
| dry                                                                                                                                                                                                                | 1,601.6        | 0.2         | n                                       | PH02A    | 2                   | 2'             | SM                 |                                                                                    |  |
| dry                                                                                                                                                                                                                | 1,086.8        | 0.4         | n                                       | PH02B    | 3                   | 3'             | SM                 |                                                                                    |  |
|                                                                                                                                                                                                                    |                |             |                                         |          |                     |                |                    | Total Depth 3 feet bgs                                                             |  |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                |             |                                         |          | Identifier:<br>PH03 |              | Date:<br>1/29/2020   |                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|-----------------------------------------|----------|---------------------|--------------|----------------------|------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                    |                |             |                                         |          | EMSU WSW 278        |              |                      |                                                                                    |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |             |                                         |          | Logged By: WM       |              | Method: Trackhoe     |                                                                                    |
| Lat/Long:                                                                                                                                                                                                          |                |             | Field Screening:<br>Chloride, TPH, BTEX |          | Hole Diameter:      |              | Total Depth:<br>2.5' |                                                                                    |
| Comments:                                                                                                                                                                                                          |                |             |                                         |          |                     |              |                      |                                                                                    |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm) | Staining                                | Sample # | Depth (ft. bgs.)    | Sample Depth | Soil/Rock Type       | Lithology/Remarks                                                                  |
| dry                                                                                                                                                                                                                | 1,008.0        | 0.2         | n                                       | PH03     | 1                   | 1'           | SM                   | SAND, brown, dry, well graded, medium - fine grained, some silt, no odor, no stain |
| dry                                                                                                                                                                                                                | 929.6          | 0.4         | n                                       | PH03A    | 2                   | 2'           | SM                   |                                                                                    |
| dry                                                                                                                                                                                                                | 1,008.0        | 0.2         | n                                       | PH03B    | 2.5                 | 2.5'         | SM                   |                                                                                    |
|                                                                                                                                                                                                                    |                |             |                                         |          |                     |              |                      | Total Depth 2.5 feet bgs                                                           |

|  <b>LT Environmental, Inc.</b><br>508 West Stevens Street<br>Carlsbad, New Mexico 88220<br>Compliance · Engineering · Remediation |                |             |                                         |          | Identifier:<br>PH04 |              | Date:<br>1/29/2020 |                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------|-----------------------------------------|----------|---------------------|--------------|--------------------|------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                    |                |             |                                         |          | EMSU WSW 278        |              |                    |                                                                                    |
| <b>LITHOLOGIC / SOIL SAMPLING LOG</b>                                                                                                                                                                              |                |             |                                         |          | Logged By: WM       |              | Method: Trackhoe   |                                                                                    |
| Lat/Long:                                                                                                                                                                                                          |                |             | Field Screening:<br>Chloride, TPH, BTEX |          | Hole Diameter:      |              | Total Depth:<br>5  |                                                                                    |
| Comments:                                                                                                                                                                                                          |                |             |                                         |          |                     |              |                    |                                                                                    |
| Moisture Content                                                                                                                                                                                                   | Chloride (ppm) | Vapor (ppm) | Staining                                | Sample # | Depth (ft. bgs.)    | Sample Depth | Soil/Rock Type     | Lithology/Remarks                                                                  |
| dry                                                                                                                                                                                                                | 1,282.4        | 0.1         | n                                       | PH04     | 1                   | 1'           | SM                 | SAND, brown, dry, well graded, medium - fine grained, some silt, no odor, no stain |
| dry                                                                                                                                                                                                                | 1,489.6        | 0.2         | n                                       | PH04A    | 2                   | 2'           | SM                 |                                                                                    |
| moist                                                                                                                                                                                                              | 1,008.0        | 0.1         | n                                       | PH04B    | 3                   | 3'           | CCHE               | CALICHE, brown - tan, moist, large grain sand                                      |
| moist                                                                                                                                                                                                              | 1,187          | 0.4         | n                                       | PH04C    | 4                   | 4'           | CCHE               |                                                                                    |
| moist                                                                                                                                                                                                              | 1,383.2        | 0.0         | n                                       | PH04D    | 5                   | 5'           | CCHE               |                                                                                    |
|                                                                                                                                                                                                                    |                |             |                                         |          |                     |              |                    | Total Depth 5 feet bgs                                                             |

ATTACHMENT 2: PHOTOGRAPHIC LOG



## PHOTOGRAPHIC LOG



**Photograph 1:** Northwest view of release extent.



**Photograph 2:** Northwest view of on pad excavation extent.



**Photograph 3:** Northern view of excavation extent.



**Photograph 4:** Eastern view of excavation extent.

## PHOTOGRAPHIC LOG



**Photograph 5:** Southwest view during pedestrian survey.



**Photograph 6:** Southeast view during pedestrian survey.

## PHOTOGRAPHIC LOG



Photograph 1: on-pad



Photograph 2: on-pad

EMSU WSW 278  
NCS2003539060  
012920009  
April 1, 2020

## PHOTOGRAPHIC LOG



Photograph 3: off-pad



Photograph 4: off-pad

EMSU WSW 278  
NCS2003539060  
012920009  
April 2, 2020

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS



# Analytical Report 649818

for  
LT Environmental, Inc.

**Project Manager: Dan Moir**

**EMSU WSW 278**

**012920004**

**30-JAN-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



30-JAN-20

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **649818**

**EMSU WSW 278**

Project Address: Eddy County

**Dan Moir:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 649818. 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. 649818 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**

Project 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 649818****LT Environmental, Inc., Arvada, CO**

EMSU WSW 278

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SS01      | S      | 01-21-20 10:25 | 0.5 ft       | 649818-001    |
| SS02      | S      | 01-21-20 10:30 | 0.5 ft       | 649818-002    |
| SS03      | S      | 01-21-20 10:35 | 0.5 ft       | 649818-003    |
| SS04      | S      | 01-21-20 10:40 | 0.5 ft       | 649818-004    |
| SS05      | S      | 01-21-20 11:10 | 0.5 ft       | 649818-005    |
| SS06      | S      | 01-21-20 11:15 | 0.5 ft       | 649818-006    |
| SS07      | S      | 01-21-20 11:20 | 0.5 ft       | 649818-007    |
| SS08      | S      | 01-21-20 11:25 | 0.5 ft       | 649818-008    |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW 278**

Project ID: 012920004  
Work Order Number(s): 649818

Report Date: 30-JAN-20  
Date Received: 01/21/2020

---

**Sample receipt non conformances and comments:**

---

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

None

**Analytical non conformances and comments:**

Batch: LBA-3114937 BTEX by EPA 8021B

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

Lab Sample ID 649818-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). m,p-Xylenes , o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 649818-001, -002, -003, -004, -005, -006, -007, -008.

The Laboratory Control Sample for Toluene, m,p-Xylenes , Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 649818

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

Project Id: 012920004

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Tue Jan-21-20 04:38 pm

Report Date: 30-JAN-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>                            | <i>Lab Id:</i>    | 649818-001       | 649818-002       | 649818-003       | 649818-004       | 649818-005       | 649818-006       |
|------------------------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                                      | <i>Field Id:</i>  | SS01             | SS02             | SS03             | SS04             | SS05             | SS06             |
|                                                      | <i>Depth:</i>     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                                      | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                                      | <i>Sampled:</i>   | Jan-21-20 10:25  | Jan-21-20 10:30  | Jan-21-20 10:35  | Jan-21-20 10:40  | Jan-21-20 11:10  | Jan-21-20 11:15  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Jan-29-20 11:30  | Jan-29-20 11:30  | Jan-29-20 11:30  | Jan-29-20 11:30  | Jan-29-20 11:30  | Jan-29-20 11:30  |
|                                                      | <i>Analyzed:</i>  | Jan-30-20 04:09  | Jan-30-20 04:30  | Jan-30-20 04:50  | Jan-30-20 05:10  | Jan-30-20 05:30  | Jan-30-20 05:50  |
|                                                      | <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 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| Toluene                                              |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| Ethylbenzene                                         |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| m,p-Xylenes                                          |                   | <0.00400 0.00400 | <0.00400 0.00400 | <0.00404 0.00404 | <0.00398 0.00398 | <0.00401 0.00401 | <0.00403 0.00403 |
| o-Xylene                                             |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| Total Xylenes                                        |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| Total BTEX                                           |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00202 0.00202 |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <i>Extracted:</i> | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:30  | Jan-23-20 17:45  | Jan-23-20 17:45  | Jan-23-20 17:45  |
|                                                      | <i>Analyzed:</i>  | Jan-24-20 01:08  | Jan-24-20 01:15  | Jan-24-20 01:22  | Jan-23-20 23:46  | Jan-23-20 23:53  | Jan-23-20 23:59  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                                             |                   | 1380 24.8        | 1370 25.0        | 1230 25.0        | 1470 25.0        | 1340 25.0        | 1230 5.03        |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <i>Extracted:</i> | Jan-24-20 10:00  | Jan-24-20 10:00  | Jan-24-20 10:00  | Jan-24-20 10:00  | Jan-24-20 10:00  | Jan-24-20 10:00  |
|                                                      | <i>Analyzed:</i>  | Jan-25-20 03:14  | Jan-25-20 03:35  | Jan-25-20 03:56  | Jan-25-20 04:17  | Jan-25-20 04:37  | Jan-25-20 04:58  |
|                                                      | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)                    |                   | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |
| Diesel Range Organics (DRO)                          |                   | 62.5 50.0        | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |
| Motor Oil Range Hydrocarbons (MRO)                   |                   | <50.0 50.0       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |
| Total GRO-DRO                                        |                   | 62.5 50.0        | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |
| Total TPH                                            |                   | 62.5 50.0        | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |

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

Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 649818

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

Project Id: 012920004

Contact: Dan Moir

Project Location: Eddy County

Date Received in Lab: Tue Jan-21-20 04:38 pm

Report Date: 30-JAN-20

Project Manager: Jessica Kramer

|                                                      |                                    |                  |                  |  |  |  |  |
|------------------------------------------------------|------------------------------------|------------------|------------------|--|--|--|--|
| <b>Analysis Requested</b>                            | <b>Lab Id:</b>                     | 649818-007       | 649818-008       |  |  |  |  |
|                                                      | <b>Field Id:</b>                   | SS07             | SS08             |  |  |  |  |
|                                                      | <b>Depth:</b>                      | 0.5- ft          | 0.5- ft          |  |  |  |  |
|                                                      | <b>Matrix:</b>                     | SOIL             | SOIL             |  |  |  |  |
|                                                      | <b>Sampled:</b>                    | Jan-21-20 11:20  | Jan-21-20 11:25  |  |  |  |  |
| <b>BTEX by EPA 8021B<br/>SUB: T104704400-19-19</b>   | <b>Extracted:</b>                  | Jan-29-20 11:30  | Jan-29-20 11:30  |  |  |  |  |
|                                                      | <b>Analyzed:</b>                   | Jan-30-20 06:10  | Jan-30-20 06:30  |  |  |  |  |
|                                                      | <b>Units/RL:</b>                   | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                                      | Benzene                            | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
|                                                      | Toluene                            | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
|                                                      | Ethylbenzene                       | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
|                                                      | m,p-Xylenes                        | <0.00400 0.00400 | <0.00398 0.00398 |  |  |  |  |
|                                                      | o-Xylene                           | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
|                                                      | Total Xylenes                      | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
|                                                      | Total BTEX                         | <0.00200 0.00200 | <0.00199 0.00199 |  |  |  |  |
| <b>Chloride by EPA 300<br/>SUB: T104704400-19-19</b> | <b>Extracted:</b>                  | Jan-23-20 17:45  | Jan-23-20 17:45  |  |  |  |  |
|                                                      | <b>Analyzed:</b>                   | Jan-24-20 00:06  | Jan-24-20 00:25  |  |  |  |  |
|                                                      | <b>Units/RL:</b>                   | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                                      | Chloride                           | 1470 24.9        | 1770 25.3        |  |  |  |  |
|                                                      |                                    |                  |                  |  |  |  |  |
| <b>TPH by SW8015 Mod<br/>SUB: T104704400-19-19</b>   | <b>Extracted:</b>                  | Jan-24-20 10:00  | Jan-24-20 10:00  |  |  |  |  |
|                                                      | <b>Analyzed:</b>                   | Jan-25-20 05:19  | Jan-25-20 05:40  |  |  |  |  |
|                                                      | <b>Units/RL:</b>                   | mg/kg RL         | mg/kg RL         |  |  |  |  |
|                                                      | Gasoline Range Hydrocarbons (GRO)  | <50.0 50.0       | <50.0 50.0       |  |  |  |  |
|                                                      | Diesel Range Organics (DRO)        | <50.0 50.0       | 176 50.0         |  |  |  |  |
|                                                      | Motor Oil Range Hydrocarbons (MRO) | <50.0 50.0       | 70.8 50.0        |  |  |  |  |
|                                                      | Total GRO-DRO                      | <50.0 50.0       | 176 50.0         |  |  |  |  |
|                                                      | Total TPH                          | <50.0 50.0       | 247 50.0         |  |  |  |  |

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.

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Version: 1.0%

*Jessica Kramer*

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS01** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-001 Date Collected: 01.21.20 10.25 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.30 Basis: Wet Weight  
 Seq Number: 3114313 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1380   | 24.8 | mg/kg | 01.24.20 01.08 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.25.20 03.14 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 62.5   | 50.0 | mg/kg | 01.25.20 03.14 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.25.20 03.14 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | 62.5   | 50.0 | mg/kg | 01.25.20 03.14 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | 62.5   | 50.0 | mg/kg | 01.25.20 03.14 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 107        | %     | 70-135 | 01.25.20 03.14 |      |
| o-Terphenyl    | 84-15-1    | 108        | %     | 70-135 | 01.25.20 03.14 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS01**  
Lab Sample Id: 649818-001

Matrix: Soil  
Date Collected: 01.21.20 10.25

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.09       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 94                | %            | 70-130        | 01.30.20 04.09       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 110               | %            | 70-130        | 01.30.20 04.09       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS02** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-002 Date Collected: 01.21.20 10.30 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.30 Basis: Wet Weight  
 Seq Number: 3114313 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1370   | 25.0 | mg/kg | 01.24.20 01.15 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.25.20 03.35 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.25.20 03.35 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.25.20 03.35 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.25.20 03.35 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.25.20 03.35 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 104        | %     | 70-135 | 01.25.20 03.35 |      |
| o-Terphenyl    | 84-15-1    | 109        | %     | 70-135 | 01.25.20 03.35 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: SS02  
Lab Sample Id: 649818-002

Matrix: Soil  
Date Collected: 01.21.20 10.30

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.20 04.30       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 87                | %            | 70-130        | 01.30.20 04.30       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 109               | %            | 70-130        | 01.30.20 04.30       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS03** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-003 Date Collected: 01.21.20 10.35 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.30 Basis: Wet Weight  
 Seq Number: 3114313 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1230   | 25.0 | mg/kg | 01.24.20 01.22 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 01.25.20 03.56 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 01.25.20 03.56 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 01.25.20 03.56 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 01.25.20 03.56 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 01.25.20 03.56 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 01.25.20 03.56 |      |
| o-Terphenyl    | 84-15-1    | 110        | %     | 70-135 | 01.25.20 03.56 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: SS03  
Lab Sample Id: 649818-003

Matrix: Soil  
Date Collected: 01.21.20 10.35

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 01.30.20 04.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 107               | %            | 70-130        | 01.30.20 04.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 87                | %            | 70-130        | 01.30.20 04.50       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS04** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-004 Date Collected: 01.21.20 10.40 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.45 Basis: Wet Weight  
 Seq Number: 3114316 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1470   | 25.0 | mg/kg | 01.23.20 23.46 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.25.20 04.17 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.25.20 04.17 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.25.20 04.17 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.25.20 04.17 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.25.20 04.17 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 108        | %     | 70-135 | 01.25.20 04.17 |      |
| o-Terphenyl    | 84-15-1    | 109        | %     | 70-135 | 01.25.20 04.17 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS04**  
Lab Sample Id: 649818-004

Matrix: Soil  
Date Collected: 01.21.20 10.40

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Date Prep: 01.29.20 11.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 01.30.20 05.10       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 84                | %            | 70-130        | 01.30.20 05.10       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 111               | %            | 70-130        | 01.30.20 05.10       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: SS05 Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-005 Date Collected: 01.21.20 11.10 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.45 Basis: Wet Weight  
 Seq Number: 3114316 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1340   | 25.0 | mg/kg | 01.23.20 23.53 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.25.20 04.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.25.20 04.37 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.25.20 04.37 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.25.20 04.37 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.25.20 04.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 110        | %     | 70-135 | 01.25.20 04.37 |      |
| o-Terphenyl    | 84-15-1    | 114        | %     | 70-135 | 01.25.20 04.37 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: SS05  
Lab Sample Id: 649818-005

Matrix: Soil  
Date Collected: 01.21.20 11.10

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.20 05.30       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 108               | %            | 70-130        | 01.30.20 05.30       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 90                | %            | 70-130        | 01.30.20 05.30       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS06** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-006 Date Collected: 01.21.20 11.15 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.45 Basis: Wet Weight  
 Seq Number: 3114316 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1230   | 5.03 | mg/kg | 01.23.20 23.59 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.25.20 04.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.25.20 04.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.25.20 04.58 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.25.20 04.58 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.25.20 04.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 114        | %     | 70-135 | 01.25.20 04.58 |      |
| o-Terphenyl    | 84-15-1    | 118        | %     | 70-135 | 01.25.20 04.58 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS06**  
Lab Sample Id: 649818-006

Matrix: Soil  
Date Collected: 01.21.20 11.15

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Date Prep: 01.29.20 11.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 01.30.20 05.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 107               | %            | 70-130        | 01.30.20 05.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 82                | %            | 70-130        | 01.30.20 05.50       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS07** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-007 Date Collected: 01.21.20 11.20 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.45 Basis: Wet Weight  
 Seq Number: 3114316 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1470   | 24.9 | mg/kg | 01.24.20 00.06 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.25.20 05.19 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.25.20 05.19 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.25.20 05.19 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.25.20 05.19 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.25.20 05.19 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 107        | %     | 70-135 | 01.25.20 05.19 |      |
| o-Terphenyl    | 84-15-1    | 111        | %     | 70-135 | 01.25.20 05.19 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: SS07  
Lab Sample Id: 649818-007

Matrix: Soil  
Date Collected: 01.21.20 11.20

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.20 06.10       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 88                | %            | 70-130        | 01.30.20 06.10       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 107               | %            | 70-130        | 01.30.20 06.10       |             |     |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS08** Matrix: Soil Date Received: 01.21.20 16.38  
 Lab Sample Id: 649818-008 Date Collected: 01.21.20 11.25 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 01.23.20 17.45 Basis: Wet Weight  
 Seq Number: 3114316 SUB: T104704400-19-19

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1770   | 25.3 | mg/kg | 01.24.20 00.25 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 01.24.20 10.00 Basis: Wet Weight  
 Seq Number: 3114492 SUB: T104704400-19-19

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.25.20 05.40 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 176    | 50.0 | mg/kg | 01.25.20 05.40 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 70.8   | 50.0 | mg/kg | 01.25.20 05.40 |      | 1   |
| Total GRO-DRO                      | PHC628     | 176    | 50.0 | mg/kg | 01.25.20 05.40 |      | 1   |
| Total TPH                          | PHC635     | 247    | 50.0 | mg/kg | 01.25.20 05.40 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 113        | %     | 70-135 | 01.25.20 05.40 |      |
| o-Terphenyl    | 84-15-1    | 112        | %     | 70-135 | 01.25.20 05.40 |      |



# Certificate of Analytical Results 649818

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SS08**  
Lab Sample Id: 649818-008

Matrix: Soil  
Date Collected: 01.21.20 11.25

Date Received: 01.21.20 16.38  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3114937

Prep Method: SW5030B

% Moisture:

Date Prep: 01.29.20 11.30

Basis: Wet Weight

SUB: T104704400-19-19

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 01.30.20 06.30       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 113               | %            | 70-130        | 01.30.20 06.30       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 84                | %            | 70-130        | 01.30.20 06.30       |             |     |



## Flagging Criteria

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

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

**+** NELAC certification not offered for this compound.

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



## LT Environmental, Inc.

EMSU WSW 278

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114313

MB Sample Id: 7695086-1-BLK

Matrix: Solid

LCS Sample Id: 7695086-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695086-1-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          | 241        | 96       | 242         | 97        | 90-110 | 0    | 20        | mg/kg | 01.23.20 22:09 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114316

MB Sample Id: 7695087-1-BLK

Matrix: Solid

LCS Sample Id: 7695087-1-BKS

Prep Method: E300P

Date Prep: 01.23.20

LCSD Sample Id: 7695087-1-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          | 256        | 102      | 257         | 103       | 90-110 | 0    | 20        | mg/kg | 01.23.20 23:14 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114313

Parent Sample Id: 649964-006

Matrix: Soil

MS Sample Id: 649964-006 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649964-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 137           | 250          | 416       | 112     | 412        | 110      | 90-110 | 1    | 20        | mg/kg | 01.23.20 22:29 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114313

Parent Sample Id: 649965-008

Matrix: Soil

MS Sample Id: 649965-008 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649965-008 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 871           | 252          | 1110      | 95      | 1110       | 95       | 90-110 | 0    | 20        | mg/kg | 01.24.20 00:02 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3114316

Parent Sample Id: 649845-001

Matrix: Soil

MS Sample Id: 649845-001 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649845-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 32.9          | 249          | 299       | 107     | 296        | 106      | 90-110 | 1    | 20        | mg/kg | 01.23.20 23:33 |      |

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



## LT Environmental, Inc.

EMSU WSW 278

## Analytical Method: Chloride by EPA 300

Seq Number: 3114316

Parent Sample Id: 649845-004

Matrix: Soil

MS Sample Id: 649845-004 S

Prep Method: E300P

Date Prep: 01.23.20

MSD Sample Id: 649845-004 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 216           | 248          | 459       | 98      | 460        | 98       | 90-110 | 0    | 20        | mg/kg | 01.24.20 01:04 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3114492

MB Sample Id: 7695211-1-BLK

Matrix: Solid

LCS Sample Id: 7695211-1-BKS

Prep Method: SW8015P

Date Prep: 01.24.20

LCSD Sample Id: 7695211-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 958        | 96       | 910         | 91        | 70-135 | 5    | 20        | mg/kg | 01.24.20 21:35 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 1060       | 106      | 975         | 98        | 70-135 | 8    | 20        | mg/kg | 01.24.20 21:35 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 102     |         | 111      |          | 103       |           | 70-135 | %     | 01.24.20 21:35 |
| o-Terphenyl    | 110     |         | 114      |          | 107       |           | 70-135 | %     | 01.24.20 21:35 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3114492

Matrix: Solid

MB Sample Id: 7695211-1-BLK

Prep Method: SW8015P

Date Prep: 01.24.20

## Parameter

|                                    | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 01.24.20 21:14 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3114492

Matrix: Soil

Parent Sample Id: 649711-001

MS Sample Id: 649711-001 S

Prep Method: SW8015P

Date Prep: 01.24.20

MSD Sample Id: 649711-001 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) | 18.3          | 997          | 913       | 90      | 951        | 94       | 70-135 | 4    | 20        | mg/kg | 01.24.20 22:38 |      |
| Diesel Range Organics (DRO)       | 33.8          | 997          | 1000      | 97      | 1030       | 100      | 70-135 | 3    | 20        | mg/kg | 01.24.20 22:38 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 108     |         | 114      |          | 70-135 | %     | 01.24.20 22:38 |
| o-Terphenyl    | 110     |         | 113      |          | 70-135 | %     | 01.24.20 22:38 |

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



**LT Environmental, Inc.**  
**EMSU WSW 278**

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

Seq Number: 3114937

MB Sample Id: 7695438-1-BLK

Matrix: Solid

LCS Sample Id: 7695438-1-BKS

Prep Method: SW5030B

Date Prep: 01.29.20

LCSD Sample Id: 7695438-1-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        | 0.102      | 102      | 0.100       | 100       | 70-130 | 2    | 35        | mg/kg | 01.30.20 01:50 |      |
| Toluene      | <0.000456 | 0.100        | 0.0972     | 97       | 0.0991      | 99        | 70-130 | 2    | 35        | mg/kg | 01.30.20 01:50 |      |
| Ethylbenzene | <0.000565 | 0.100        | 0.0907     | 91       | 0.0937      | 94        | 70-130 | 3    | 35        | mg/kg | 01.30.20 01:50 |      |
| m,p-Xylenes  | <0.00101  | 0.200        | 0.181      | 91       | 0.188       | 94        | 70-130 | 4    | 35        | mg/kg | 01.30.20 01:50 |      |
| o-Xylene     | <0.000344 | 0.100        | 0.0924     | 92       | 0.0950      | 95        | 70-130 | 3    | 35        | mg/kg | 01.30.20 01:50 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 102     |         | 104      |          | 102       |           | 70-130 | %     | 01.30.20 01:50 |
| 4-Bromofluorobenzene | 90      |         | 95       |          | 92        |           | 70-130 | %     | 01.30.20 01:50 |

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

Seq Number: 3114937

Parent Sample Id: 649818-001

Matrix: Soil

MS Sample Id: 649818-001 S

Prep Method: SW5030B

Date Prep: 01.29.20

MSD Sample Id: 649818-001 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       | 0.0811    | 81      | 0.0751     | 76       | 70-130 | 8    | 35        | mg/kg | 01.30.20 02:30 |      |
| Toluene      | 0.000940      | 0.0996       | 0.0702    | 70      | 0.0679     | 68       | 70-130 | 3    | 35        | mg/kg | 01.30.20 02:30 | X    |
| Ethylbenzene | <0.000563     | 0.0996       | 0.0695    | 70      | 0.0622     | 63       | 70-130 | 11   | 35        | mg/kg | 01.30.20 02:30 | X    |
| m,p-Xylenes  | <0.00101      | 0.199        | 0.0636    | 32      | 0.0634     | 32       | 70-130 | 0    | 35        | mg/kg | 01.30.20 02:30 | X    |
| o-Xylene     | <0.000343     | 0.0996       | 0.0648    | 65      | 0.0578     | 58       | 70-130 | 11   | 35        | mg/kg | 01.30.20 02:30 | X    |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 107     |         | 109      |          | 70-130 | %     | 01.30.20 02:30 |
| 4-Bromofluorobenzene | 84      |         | 88       |          | 70-130 | %     | 01.30.20 02:30 |

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

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 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  
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 281-3333  
Hobbs, NM (575-392-7550)

Work Order No: 1049818

Page 1 of 1

[www.xenco.com](http://www.xenco.com)

## Chain of Custody

|                  |                |                                        |                                   |              |
|------------------|----------------|----------------------------------------|-----------------------------------|--------------|
| 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:                          |              |
| City, State ZIP: |                | Midland, Tx 79705                      | City, State ZIP:                  |              |
| Phone:           | (432) 236-3849 | Email:                                 | jenaka@ltenv.com, dmoir@ltenv.com |              |

|                                                                                                                                                                                          |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <b>Work Order Comments</b>                                                                                                                                                               |  |  |  |  |
| <b>Program: UST/PST</b> <input type="checkbox"/> RP <input type="checkbox"/> growfields <input checked="" type="checkbox"/> RC <input type="checkbox"/> perfund <input type="checkbox"/> |  |  |  |  |
| <b>State of Project:</b>                                                                                                                                                                 |  |  |  |  |
| Reporting: Level II <input type="checkbox"/> Level III <input type="checkbox"/> PT/UST <input type="checkbox"/> RP <input checked="" type="checkbox"/> Level IV <input type="checkbox"/> |  |  |  |  |
| Deliverables: EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: <input type="checkbox"/>                                                                                |  |  |  |  |

[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 <i>[Signature]</i>         | <i>[Signature]</i>       | 1/24/20 16:38 | 2                            |                          |           |
| 3                            |                          |               | 4                            |                          |           |
| 5                            |                          |               | 6                            |                          |           |

Revised Date 05/11/18 Rev. 2018.1



## Inter-Office Shipment

Page 1 of 2

IOS Number **56547**

Date/Time: 01/22/20 11:44

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 777580852397

E-Mail: jessica.kramer@xenco.com

| Sample Id  | Matrix | Client Sample Id | Sample Collection | Method       | Method Name         | Lab Due  | HT Due   | PM  | Analytes             | Sign |
|------------|--------|------------------|-------------------|--------------|---------------------|----------|----------|-----|----------------------|------|
| 649818-001 | S      | SS01             | 01/21/20 10:25    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-001 | S      | SS01             | 01/21/20 10:25    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-001 | S      | SS01             | 01/21/20 10:25    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-002 | S      | SS02             | 01/21/20 10:30    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-002 | S      | SS02             | 01/21/20 10:30    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-002 | S      | SS02             | 01/21/20 10:30    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-003 | S      | SS03             | 01/21/20 10:35    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-003 | S      | SS03             | 01/21/20 10:35    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-003 | S      | SS03             | 01/21/20 10:35    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-004 | S      | SS04             | 01/21/20 10:40    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-004 | S      | SS04             | 01/21/20 10:40    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-004 | S      | SS04             | 01/21/20 10:40    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-005 | S      | SS05             | 01/21/20 11:10    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-005 | S      | SS05             | 01/21/20 11:10    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-005 | S      | SS05             | 01/21/20 11:10    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-006 | S      | SS06             | 01/21/20 11:15    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-006 | S      | SS06             | 01/21/20 11:15    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-006 | S      | SS06             | 01/21/20 11:15    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-007 | S      | SS07             | 01/21/20 11:20    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-007 | S      | SS07             | 01/21/20 11:20    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-007 | S      | SS07             | 01/21/20 11:20    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |
| 649818-008 | S      | SS08             | 01/21/20 11:25    | SW8021B      | BTEX by EPA 8021B   | 01/27/20 | 02/04/20 | JKR | BZ BZME EBZ XYLENES  |      |
| 649818-008 | S      | SS08             | 01/21/20 11:25    | E300_CL      | Chloride by EPA 300 | 01/27/20 | 02/18/20 | JKR | CL                   |      |
| 649818-008 | S      | SS08             | 01/21/20 11:25    | SW8015MOD_NM | TPH by SW8015 Mod   | 01/27/20 | 02/04/20 | JKR | GRO-DRO PHCC10C28 PF |      |



## Inter-Office Shipment

Page 2 of 2

**IOS Number 56547**

Date/Time: 01/22/20 11:44

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 777580852397

E-Mail: jessica.kramer@xenco.com

### Inter Office Shipment or Sample Comments:

Relinquished By:

A handwritten signature in black ink, appearing to read 'Elizabeth McClellan', written over a light gray rectangular background.

Elizabeth McClellan

Received By:

A handwritten signature in black ink, appearing to read 'Brianna Teel', written over a light gray rectangular background.

Brianna Teel

Date Relinquished: 01/22/2020

Date Received: 01/23/2020 11:19

Cooler Temperature: 0.3



## Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 56547

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 01/22/2020 11:44 AM

Received By: Brianna Teel

Date Received: 01/23/2020 11:19 AM

## Sample Receipt Checklist

## Comments

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

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

NonConformance:

Corrective Action Taken:

## Nonconformance Documentation

Contact: \_\_\_\_\_ Contacted by : \_\_\_\_\_ Date: \_\_\_\_\_

Checklist reviewed by:

Brianna Teel

Date: 01/23/2020

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.21.2020 04.38.00 PM

Work Order #: 649818

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

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

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

Analyst:

PH Device/Lot#:

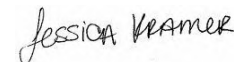
Checklist completed by:



Elizabeth McClellan

Date: 01.22.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.22.2020



# Analytical Report 650838

for

**LT Environmental, Inc.**

**Project Manager: Dan Moir**

**EMSU WSW**

**012920009**

**01.31.2020**

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)  
Xenco-Carlsbad (LELAP): Louisiana (05092)  
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-19-5)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.31.2020

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **650838**

**EMSU WSW**

Project Address: Lea

**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) 650838. 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. 650838 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**

Project Assistant

*A Small Business and Minority Company*

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

**Sample Cross Reference 650838****LT Environmental, Inc., Arvada, CO**

EMSU WSW

| <b>Sample Id</b> | <b>Matrix</b> | <b>Date Collected</b> | <b>Sample Depth</b> | <b>Lab Sample Id</b> |
|------------------|---------------|-----------------------|---------------------|----------------------|
| PH01             | S             | 01.29.2020 09:47      | 1 ft                | 650838-001           |
| PH01A            | S             | 01.29.2020 10:08      | 3 ft                | 650838-002           |
| PH02             | S             | 01.29.2020 10:35      | 1 ft                | 650838-003           |
| PH02A            | S             | 01.29.2020 11:56      | 3 ft                | 650838-004           |
| PH03             | S             | 01.29.2020 12:06      | 1 ft                | 650838-005           |
| PH03A            | S             | 01.29.2020 12:23      | 2.5 ft              | 650838-006           |
| PH04             | S             | 01.29.2020 12:28      | 1 ft                | 650838-007           |
| PH04A            | S             | 01.29.2020 13:53      | 4 ft                | 650838-008           |
| PH04B            | S             | 01.29.2020 14:03      | 5 ft                | 650838-009           |
| SS09             | S             | 01.29.2020 14:21      | 0.5 ft              | 650838-010           |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW**

Project ID: 012920009  
Work Order Number(s): 650838

Report Date: 01.31.2020  
Date Received: 01.30.2020

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**Sample receipt non conformances and comments:**

---

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

None

**Analytical non conformances and comments:**

Batch: LBA-3115037 Inorganic Anions by EPA 300

Lab Sample ID 650840-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 650838-001, -002, -003, -004, -005, -006, -007, -008, -009, -010.

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

Batch: LBA-3115056 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 650838

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Thu 01.30.2020 10:30

Report Date: 01.31.2020 11:41

Project Manager: Jessica Kramer

| Analysis Requested                 | Lab Id:    | 650838-001       | 650838-002       | 650838-003       | 650838-004       | 650838-005       | 650838-006       |
|------------------------------------|------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | Field Id:  | PH01             | PH01A            | PH02             | PH02A            | PH03             | PH03A            |
|                                    | Depth:     | 1- ft            | 3- ft            | 1- ft            | 3- ft            | 1- ft            | 2.5- ft          |
|                                    | Matrix:    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | Sampled:   | 01.29.2020 09:47 | 01.29.2020 10:08 | 01.29.2020 10:35 | 01.29.2020 11:56 | 01.29.2020 12:06 | 01.29.2020 12:23 |
| BTEX by EPA 8021B                  | Extracted: | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 |
|                                    | Analyzed:  | 01.30.2020 14:28 | 01.30.2020 14:49 | 01.30.2020 15:16 | 01.30.2020 15:36 | 01.30.2020 15:57 | 01.30.2020 16:17 |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| Toluene                            |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| Ethylbenzene                       |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| m,p-Xylenes                        |            | <0.00399 0.00399 | <0.00400 0.00400 | <0.00399 0.00399 | <0.00399 0.00399 | <0.00397 0.00397 | <0.00399 0.00399 |
| o-Xylene                           |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| Total Xylenes                      |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| Total BTEX                         |            | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00198 0.00198 | <0.00200 0.00200 |
| Chloride by EPA 300                | Extracted: | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 |
|                                    | Analyzed:  | 01.30.2020 12:30 | 01.30.2020 12:47 | 01.30.2020 12:53 | 01.30.2020 12:58 | 01.30.2020 13:04 | 01.30.2020 13:21 |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |            | 235 49.9         | 2130 50.0        | 1020 49.9        | 1110 49.7        | 987 49.9         | 834 49.5         |
| TPH by SW8015 Mod                  | Extracted: | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 |
|                                    | Analyzed:  | 01.30.2020 18:25 | 01.30.2020 21:44 | 01.30.2020 18:45 | 01.30.2020 19:05 | 01.30.2020 21:44 | 01.30.2020 22:04 |
|                                    | Units/RL:  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |            | <50.3 50.3       | <49.9 49.9       | <50.2 50.2       | <50.2 50.2       | <50.2 50.2       | <50.0 50.0       |
| Diesel Range Organics (DRO)        |            | <50.3 50.3       | 62.5 49.9        | <50.2 50.2       | <50.2 50.2       | 651 50.2         | 440 50.0         |
| Motor Oil Range Hydrocarbons (MRO) |            | <50.3 50.3       | <49.9 49.9       | <50.2 50.2       | <50.2 50.2       | 225 50.2         | 124 50.0         |
| Total GRO-DRO                      |            | <50.3 50.3       | 62.5 49.9        | <50.2 50.2       | <50.2 50.2       | 651 50.2         | 440 50.0         |
| Total TPH                          |            | <50.3 50.3       | 62.5 49.9        | <50.2 50.2       | <50.2 50.2       | 876 50.2         | 564 50.0         |

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

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 650838

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Thu 01.30.2020 10:30

Report Date: 01.31.2020 11:41

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 650838-007       | 650838-008       | 650838-009       | 650838-010       |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|--|--|
|                                    | <i>Field Id:</i>  | PH04             | PH04A            | PH04B            | SS09             |  |  |
|                                    | <i>Depth:</i>     | 1- ft            | 4- ft            | 5- ft            | 0.5- ft          |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             |  |  |
|                                    | <i>Sampled:</i>   | 01.29.2020 12:28 | 01.29.2020 13:53 | 01.29.2020 14:03 | 01.29.2020 14:21 |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 |  |  |
|                                    | <i>Analyzed:</i>  | 01.30.2020 16:37 | 01.30.2020 16:58 | 01.30.2020 17:18 | 01.30.2020 17:39 |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Benzene                            |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| Toluene                            |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| Ethylbenzene                       |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| m,p-Xylenes                        |                   | <0.00395 0.00395 | <0.00397 0.00397 | <0.00396 0.00396 | <0.00399 0.00399 |  |  |
| o-Xylene                           |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| Total Xylenes                      |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| Total BTEX                         |                   | <0.00198 0.00198 | <0.00198 0.00198 | <0.00198 0.00198 | <0.00200 0.00200 |  |  |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 | 01.30.2020 12:00 |  |  |
|                                    | <i>Analyzed:</i>  | 01.30.2020 13:26 | 01.30.2020 13:32 | 01.30.2020 13:37 | 01.30.2020 13:43 |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Chloride                           |                   | 1240 49.6        | 1180 49.9        | 1320 49.6        | 1580 49.5        |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 | 01.30.2020 13:00 |  |  |
|                                    | <i>Analyzed:</i>  | 01.30.2020 19:05 | 01.30.2020 19:25 | 01.30.2020 19:25 | 01.30.2020 19:45 |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.2 50.2       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       |  |  |
| Diesel Range Organics (DRO)        |                   | <50.2 50.2       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.2 50.2       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       |  |  |
| Total GRO-DRO                      |                   | <50.2 50.2       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       |  |  |
| Total TPH                          |                   | <50.2 50.2       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       |  |  |

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Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH01** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-001 Date Collected: 01.29.2020 09:47 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 235    | 49.9 | mg/kg | 01.30.2020 12:30 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 01.30.2020 18:25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.3  | 50.3 | mg/kg | 01.30.2020 18:25 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 01.30.2020 18:25 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.3  | 50.3 | mg/kg | 01.30.2020 18:25 | U    | 1   |
| Total TPH                          | PHC635     | <50.3  | 50.3 | mg/kg | 01.30.2020 18:25 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 126        | %     | 70-135 | 01.30.2020 18:25 |      |
| o-Terphenyl    | 84-15-1    | 120        | %     | 70-135 | 01.30.2020 18:25 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH01**  
Lab Sample Id: 650838-001

Matrix: Soil  
Date Collected: 01.29.2020 09:47

Date Received: 01.30.2020 10:30  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| Toluene       | 108-88-3    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |
| Total BTEX    |             | <0.00200 | 0.00200 | mg/kg | 01.30.2020 14:28 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 4-Bromofluorobenzene | 460-00-4   | 96         | %     | 70-130 | 01.30.2020 14:28 |      |
| 1,4-Difluorobenzene  | 540-36-3   | 111        | %     | 70-130 | 01.30.2020 14:28 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH01A** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-002 Date Collected: 01.29.2020 10:08 Sample Depth: 3 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 2130   | 50.0 | mg/kg | 01.30.2020 12:47 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9       | 49.9 | mg/kg | 01.30.2020 21:44 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>62.5</b> | 49.9 | mg/kg | 01.30.2020 21:44 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9       | 49.9 | mg/kg | 01.30.2020 21:44 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>62.5</b> | 49.9 | mg/kg | 01.30.2020 21:44 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>62.5</b> | 49.9 | mg/kg | 01.30.2020 21:44 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 124        | %     | 70-135 | 01.30.2020 21:44 |      |
| o-Terphenyl    | 84-15-1    | 120        | %     | 70-135 | 01.30.2020 21:44 |      |



# Certificate of Analytical Results 650838

**LT Environmental, Inc., Arvada, CO**

EMSU WSW

Sample Id: **PH01A**  
Lab Sample Id: 650838-002

Matrix: Soil  
Date Collected: 01.29.2020 10:08

Date Received: 01.30.2020 10:30  
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 14:49     | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 110               | %            | 70-130        | 01.30.2020 14:49     |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 94                | %            | 70-130        | 01.30.2020 14:49     |             |     |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH02** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-003 Date Collected: 01.29.2020 10:35 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1020   | 49.9 | mg/kg | 01.30.2020 12:53 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.30.2020 18:45 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.30.2020 18:45 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.30.2020 18:45 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.30.2020 18:45 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.30.2020 18:45 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 135        | %     | 70-135 | 01.30.2020 18:45 |      |
| o-Terphenyl    | 84-15-1    | 124        | %     | 70-135 | 01.30.2020 18:45 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH02**  
Lab Sample Id: 650838-003

Matrix: Soil  
Date Collected: 01.29.2020 10:35

Date Received: 01.30.2020 10:30  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:16     | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 101               | %            | 70-130        | 01.30.2020 15:16     |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 01.30.2020 15:16     |             |     |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH02A** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-004 Date Collected: 01.29.2020 11:56 Sample Depth: 3 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1110   | 49.7 | mg/kg | 01.30.2020 12:58 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 128        | %     | 70-135 | 01.30.2020 19:05 |      |
| o-Terphenyl    | 84-15-1    | 124        | %     | 70-135 | 01.30.2020 19:05 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH02A**  
Lab Sample Id: 650838-004

Matrix: Soil  
Date Collected: 01.29.2020 11:56

Date Received: 01.30.2020 10:30  
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3115056

Prep Method: SW5030B

% Moisture:

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 01.30.2020 15:36     | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 94                | %            | 70-130        | 01.30.2020 15:36     |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 111               | %            | 70-130        | 01.30.2020 15:36     |             |     |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH03** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-005 Date Collected: 01.29.2020 12:06 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 987    | 49.9 | mg/kg | 01.30.2020 13:04 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.30.2020 21:44 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 651    | 50.2 | mg/kg | 01.30.2020 21:44 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 225    | 50.2 | mg/kg | 01.30.2020 21:44 |      | 1   |
| Total GRO-DRO                      | PHC628     | 651    | 50.2 | mg/kg | 01.30.2020 21:44 |      | 1   |
| Total TPH                          | PHC635     | 876    | 50.2 | mg/kg | 01.30.2020 21:44 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 131        | %     | 70-135 | 01.30.2020 21:44 |      |
| o-Terphenyl    | 84-15-1    | 128        | %     | 70-135 | 01.30.2020 21:44 |      |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH03**  
Lab Sample Id: 650838-005

Matrix: Soil  
Date Collected: 01.29.2020 12:06

Date Received: 01.30.2020 10:30  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| Toluene       | 108-88-3    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |
| Total BTEX    |             | <0.00198 | 0.00198 | mg/kg | 01.30.2020 15:57 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 4-Bromofluorobenzene | 460-00-4   | 95         | %     | 70-130 | 01.30.2020 15:57 |      |
| 1,4-Difluorobenzene  | 540-36-3   | 112        | %     | 70-130 | 01.30.2020 15:57 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH03A** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-006 Date Collected: 01.29.2020 12:23 Sample Depth: 2.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 834    | 49.5 | mg/kg | 01.30.2020 13:21 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.30.2020 22:04 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 440    | 50.0 | mg/kg | 01.30.2020 22:04 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 124    | 50.0 | mg/kg | 01.30.2020 22:04 |      | 1   |
| Total GRO-DRO                      | PHC628     | 440    | 50.0 | mg/kg | 01.30.2020 22:04 |      | 1   |
| Total TPH                          | PHC635     | 564    | 50.0 | mg/kg | 01.30.2020 22:04 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 122        | %     | 70-135 | 01.30.2020 22:04 |      |
| o-Terphenyl    | 84-15-1    | 118        | %     | 70-135 | 01.30.2020 22:04 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH03A**  
Lab Sample Id: 650838-006

Matrix: Soil  
Date Collected: 01.29.2020 12:23

Date Received: 01.30.2020 10:30  
Sample Depth: 2.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3115056

Prep Method: SW5030B

% Moisture:

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| Toluene       | 108-88-3    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |
| Total BTEX    |             | <0.00200 | 0.00200 | mg/kg | 01.30.2020 16:17 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 1,4-Difluorobenzene  | 540-36-3   | 109        | %     | 70-130 | 01.30.2020 16:17 |      |
| 4-Bromofluorobenzene | 460-00-4   | 94         | %     | 70-130 | 01.30.2020 16:17 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-007 Date Collected: 01.29.2020 12:28 Sample Depth: 1 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1240   | 49.6 | mg/kg | 01.30.2020 13:26 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 01.30.2020 19:05 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 135        | %     | 70-135 | 01.30.2020 19:05 |      |
| o-Terphenyl    | 84-15-1    | 123        | %     | 70-135 | 01.30.2020 19:05 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04**  
Lab Sample Id: 650838-007

Matrix: Soil  
Date Collected: 01.29.2020 12:28

Date Received: 01.30.2020 10:30  
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3115056

Prep Method: SW5030B

% Moisture:

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| Toluene       | 108-88-3    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00395 | 0.00395 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |
| Total BTEX    |             | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:37 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 4-Bromofluorobenzene | 460-00-4   | 97         | %     | 70-130 | 01.30.2020 16:37 |      |
| 1,4-Difluorobenzene  | 540-36-3   | 104        | %     | 70-130 | 01.30.2020 16:37 |      |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04A** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-008 Date Collected: 01.29.2020 13:53 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1180   | 49.9 | mg/kg | 01.30.2020 13:32 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 129        | %     | 70-135 | 01.30.2020 19:25 |      |
| o-Terphenyl    | 84-15-1    | 123        | %     | 70-135 | 01.30.2020 19:25 |      |



# Certificate of Analytical Results 650838

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04A**  
Lab Sample Id: 650838-008

Matrix: Soil  
Date Collected: 01.29.2020 13:53

Date Received: 01.30.2020 10:30  
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| Toluene       | 108-88-3    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00397 | 0.00397 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |
| Total BTEX    |             | <0.00198 | 0.00198 | mg/kg | 01.30.2020 16:58 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 1,4-Difluorobenzene  | 540-36-3   | 110        | %     | 70-130 | 01.30.2020 16:58 |      |
| 4-Bromofluorobenzene | 460-00-4   | 97         | %     | 70-130 | 01.30.2020 16:58 |      |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04B** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-009 Date Collected: 01.29.2020 14:03 Sample Depth: 5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1320   | 49.6 | mg/kg | 01.30.2020 13:37 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 01.30.2020 19:25 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 135        | %     | 70-135 | 01.30.2020 19:25 |      |
| o-Terphenyl    | 84-15-1    | 125        | %     | 70-135 | 01.30.2020 19:25 |      |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **PH04B**  
Lab Sample Id: 650838-009

Matrix: Soil  
Date Collected: 01.29.2020 14:03

Date Received: 01.30.2020 10:30  
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3115056

Prep Method: SW5030B

% Moisture:

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00396          | 0.00396      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 01.30.2020 17:18     | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 110               | %            | 70-130        | 01.30.2020 17:18     |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 01.30.2020 17:18     |             |     |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **SS09** Matrix: Soil Date Received: 01.30.2020 10:30  
 Lab Sample Id: 650838-010 Date Collected: 01.29.2020 14:21 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 01.30.2020 12:00 Basis: Wet Weight  
 Seq Number: 3115037

| Parameter | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|-----------|------------|--------|------|-------|------------------|------|-----|
| Chloride  | 16887-00-6 | 1580   | 49.5 | mg/kg | 01.30.2020 13:43 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 01.30.2020 13:00 Basis: Wet Weight  
 Seq Number: 3115070

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date    | Flag | Dil |
|------------------------------------|------------|--------|------|-------|------------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 01.30.2020 19:45 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 01.30.2020 19:45 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 01.30.2020 19:45 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 01.30.2020 19:45 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 01.30.2020 19:45 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------|------------|------------|-------|--------|------------------|------|
| 1-Chlorooctane | 111-85-3   | 125        | %     | 70-135 | 01.30.2020 19:45 |      |
| o-Terphenyl    | 84-15-1    | 120        | %     | 70-135 | 01.30.2020 19:45 |      |



# Certificate of Analytical Results 650838

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **SS09**  
 Lab Sample Id: 650838-010

Matrix: Soil  
 Date Collected: 01.29.2020 14:21

Date Received: 01.30.2020 10:30  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 01.30.2020 12:00

Basis: Wet Weight

Seq Number: 3115056

| Parameter     | Cas Number  | Result   | RL      | Units | Analysis Date    | Flag | Dil |
|---------------|-------------|----------|---------|-------|------------------|------|-----|
| Benzene       | 71-43-2     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| Toluene       | 108-88-3    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| Ethylbenzene  | 100-41-4    | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| m,p-Xylenes   | 179601-23-1 | <0.00399 | 0.00399 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| o-Xylene      | 95-47-6     | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| Total Xylenes | 1330-20-7   | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |
| Total BTEX    |             | <0.00200 | 0.00200 | mg/kg | 01.30.2020 17:39 | U    | 1   |

| Surrogate            | Cas Number | % Recovery | Units | Limits | Analysis Date    | Flag |
|----------------------|------------|------------|-------|--------|------------------|------|
| 4-Bromofluorobenzene | 460-00-4   | 97         | %     | 70-130 | 01.30.2020 17:39 |      |
| 1,4-Difluorobenzene  | 540-36-3   | 111        | %     | 70-130 | 01.30.2020 17:39 |      |



## Flagging Criteria

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

\*\* Surrogate recovered outside laboratory control limit.

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

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

+ NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
**EMSU WSW**

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115037

MB Sample Id: 7695576-1-BLK

Matrix: Solid

LCS Sample Id: 7695576-1-BKS

Prep Method: E300P

Date Prep: 01.30.2020

LCSD Sample Id: 7695576-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date    | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|------------------|------|
| Chloride  | <10.0     | 250          | 262        | 105      | 262         | 105       | 90-110 | 0    | 20        | mg/kg | 01.30.2020 12:19 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115037

Parent Sample Id: 650838-001

Matrix: Soil

MS Sample Id: 650838-001 S

Prep Method: E300P

Date Prep: 01.30.2020

MSD Sample Id: 650838-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date    | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|------------------|------|
| Chloride  | 235           | 198          | 1270      | 523     | 1310       | 543      | 90-110 | 3    | 20        | mg/kg | 01.30.2020 12:36 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115037

Parent Sample Id: 650840-001

Matrix: Soil

MS Sample Id: 650840-001 S

Prep Method: E300P

Date Prep: 01.30.2020

MSD Sample Id: 650840-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date    | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|------------------|------|
| Chloride  | 9360          | 249          | 9690      | 133     | 9680       | 129      | 90-110 | 0    | 20        | mg/kg | 01.30.2020 16:15 | X    |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115070

MB Sample Id: 7695612-1-BLK

Matrix: Solid

LCS Sample Id: 7695612-1-BKS

Prep Method: SW8015P

Date Prep: 01.30.2020

LCSD Sample Id: 7695612-1-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         | 975        | 98       | 972         | 97        | 70-135 | 0    | 35        | mg/kg | 01.30.2020 18:05 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 822        | 82       | 801         | 80        | 70-135 | 3    | 35        | mg/kg | 01.30.2020 18:05 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date    |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|------------------|
| 1-Chlorooctane | 132     |         | 118      |          | 115       |           | 70-135 | %     | 01.30.2020 18:05 |
| o-Terphenyl    | 122     |         | 106      |          | 99        |           | 70-135 | %     | 01.30.2020 18:05 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115070

Matrix: Solid

MB Sample Id: 7695612-1-BLK

Prep Method: SW8015P

Date Prep: 01.30.2020

| Parameter                          | MB Result | Units | Analysis Date    | Flag |
|------------------------------------|-----------|-------|------------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 01.30.2020 17:45 |      |

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

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

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

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



**LT Environmental, Inc.**  
**EMSU WSW**

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115070

Parent Sample Id: 650838-001

Matrix: Soil

MS Sample Id: 650838-001 S

Prep Method: SW8015P

Date Prep: 01.30.2020

MSD Sample Id: 650838-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date    | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|------------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0         | 999          | 990       | 99      | 965        | 97       | 70-135 | 3    | 35        | mg/kg | 01.30.2020 18:25 |      |
| Diesel Range Organics (DRO)       | <50.0         | 999          | 815       | 82      | 994        | 99       | 70-135 | 20   | 35        | mg/kg | 01.30.2020 18:25 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date    |
|----------------|---------|---------|----------|----------|--------|-------|------------------|
| 1-Chlorooctane | 115     |         | 134      |          | 70-135 | %     | 01.30.2020 18:25 |
| o-Terphenyl    | 99      |         | 127      |          | 70-135 | %     | 01.30.2020 18:25 |

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

Seq Number: 3115056

MB Sample Id: 7695572-1-BLK

Matrix: Solid

LCS Sample Id: 7695572-1-BKS

Prep Method: SW5030B

Date Prep: 01.30.2020

LCSD Sample Id: 7695572-1-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        | 0.119      | 119      | 0.109       | 109       | 70-130 | 9    | 35        | mg/kg | 01.30.2020 12:46 |      |
| Toluene      | <0.00200  | 0.100        | 0.109      | 109      | 0.0994      | 99        | 70-130 | 9    | 35        | mg/kg | 01.30.2020 12:46 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.104      | 104      | 0.0946      | 95        | 71-129 | 9    | 35        | mg/kg | 01.30.2020 12:46 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.202      | 101      | 0.184       | 92        | 70-135 | 9    | 35        | mg/kg | 01.30.2020 12:46 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.102      | 102      | 0.0938      | 94        | 71-133 | 8    | 35        | mg/kg | 01.30.2020 12:46 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date    |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 108     |         | 109      |          | 109       |           | 70-130 | %     | 01.30.2020 12:46 |
| 4-Bromofluorobenzene | 90      |         | 89       |          | 94        |           | 70-130 | %     | 01.30.2020 12:46 |

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

Seq Number: 3115056

Parent Sample Id: 650838-001

Matrix: Soil

MS Sample Id: 650838-001 S

Prep Method: SW5030B

Date Prep: 01.30.2020

MSD Sample Id: 650838-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date    | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|------------------|------|
| Benzene      | <0.00198      | 0.0988       | 0.119     | 120     | 0.116      | 117      | 70-130 | 3    | 35        | mg/kg | 01.30.2020 13:27 |      |
| Toluene      | <0.00198      | 0.0988       | 0.128     | 130     | 0.106      | 107      | 70-130 | 19   | 35        | mg/kg | 01.30.2020 13:27 |      |
| Ethylbenzene | <0.00198      | 0.0988       | 0.123     | 124     | 0.102      | 103      | 71-129 | 19   | 35        | mg/kg | 01.30.2020 13:27 |      |
| m,p-Xylenes  | <0.00395      | 0.198        | 0.240     | 121     | 0.199      | 101      | 70-135 | 19   | 35        | mg/kg | 01.30.2020 13:27 |      |
| o-Xylene     | <0.00198      | 0.0988       | 0.120     | 121     | 0.0992     | 100      | 71-133 | 19   | 35        | mg/kg | 01.30.2020 13:27 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date    |
|----------------------|---------|---------|----------|----------|--------|-------|------------------|
| 1,4-Difluorobenzene  | 109     |         | 109      |          | 70-130 | %     | 01.30.2020 13:27 |
| 4-Bromofluorobenzene | 94      |         | 92       |          | 70-130 | %     | 01.30.2020 13:27 |

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

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

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

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



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

## Chain of Custody

Work Order No: 1050838

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

| Work Order Comments |                                                                                                                                                                               |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: UST/PST    | <input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> Deepfund <input type="checkbox"/> |
| State of Project:   |                                                                                                                                                                               |
| Reporting: Level II | <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RP <input checked="" type="checkbox"/> Level IV <input type="checkbox"/>         |
| Deliverables: EDD   | <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                                                |

[illegible]

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|-------|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|------|----|----|----|----|---|---|----|
| <b>Total 200.7 / 6010</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>200.8 / 6020:</b> | 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. |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |
| <b>1631 / 245.1 / 7470 / 7471 : Hg</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |             |       |          |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |

| Relinquished by: (Signature)                                                   | Received by: (Signature)                                                        | Date/Time     | Relinquished by: (Signature) | Received by: (Signature) | Date/Time |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------|------------------------------|--------------------------|-----------|
|  |  | 1/30/20 10:30 |                              |                          |           |
|                                                                                |                                                                                 |               |                              |                          |           |
|                                                                                |                                                                                 |               |                              |                          |           |
|                                                                                |                                                                                 |               |                              |                          |           |
|                                                                                |                                                                                 |               |                              |                          |           |

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 01.30.2020 10.30.00 AM

Work Order #: 650838

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T-NM-007

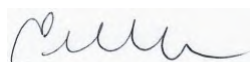
| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | .8       |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received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

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

Analyst:

PH Device/Lot#:

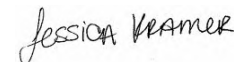
Checklist completed by:



Elizabeth McClellan

Date: 01.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 01.30.2020

# Analytical Report 651144

for  
LT Environmental, Inc.

**Project Manager: Dan Moir**

**EMSU WSW**

**012920009**

**06-FEB-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



06-FEB-20

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **651144**

**EMSU WSW**

Project Address: Lea

**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) 651144. 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. 651144 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**

Project 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 651144****LT Environmental, Inc., Arvada, CO**

EMSU WSW

| <b>Sample Id</b> | <b>Matrix</b> | <b>Date Collected</b> | <b>Sample Depth</b> | <b>Lab Sample Id</b> |
|------------------|---------------|-----------------------|---------------------|----------------------|
| FS01             | S             | 01-31-20 11:37        | 0.5 ft              | 651144-001           |
| FS02             | S             | 01-31-20 11:40        | 0.5 ft              | 651144-002           |
| FS03             | S             | 01-31-20 11:43        | 0.5 ft              | 651144-003           |
| FS04             | S             | 01-31-20 11:45        | 0.5 ft              | 651144-004           |
| FS05             | S             | 01-31-20 11:49        | 0.5 ft              | 651144-005           |
| FS06             | S             | 01-31-20 11:51        | 0.5 ft              | 651144-006           |
| FS07             | S             | 01-31-20 11:54        | 0.5 ft              | 651144-007           |
| FS08             | S             | 01-31-20 11:56        | 0.5 ft              | 651144-008           |
| FS09             | S             | 01-31-20 11:58        | 0.5 ft              | 651144-009           |
| FS10             | S             | 01-31-20 12:01        | 0.5 ft              | 651144-010           |
| FS11             | S             | 01-31-20 12:05        | 0.5 ft              | 651144-011           |
| FS12             | S             | 01-31-20 12:08        | 0.5 ft              | 651144-012           |
| FS13             | S             | 01-31-20 12:11        | 0.5 ft              | 651144-013           |
| FS14             | S             | 01-31-20 12:54        | 0.5 ft              | 651144-014           |
| FS15             | S             | 01-31-20 13:12        | 0.5 ft              | 651144-015           |
| FS16             | S             | 01-31-20 13:17        | 0.5 ft              | 651144-016           |
| FS17             | S             | 01-31-20 13:19        | 0.5 ft              | 651144-017           |
| FS18             | S             | 01-31-20 13:22        | 0.5 ft              | 651144-018           |
| FS19             | S             | 01-31-20 13:26        | 0.5 ft              | 651144-019           |
| FS20             | S             | 01-31-20 13:54        | 0.5 ft              | 651144-020           |
| FS21             | S             | 01-31-20 13:57        | 0.5 ft              | 651144-021           |
| FS22             | S             | 01-31-20 14:05        | 0.5 ft              | 651144-022           |
| FS23             | S             | 01-31-20 14:12        | 0.5 ft              | 651144-023           |
| FS24             | S             | 01-31-20 14:15        | 0.5 ft              | 651144-024           |
| FS25             | S             | 01-31-20 14:18        | 0.5 ft              | 651144-025           |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW**

Project ID: 012920009  
Work Order Number(s): 651144

Report Date: 06-FEB-20  
Date Received: 02/03/2020

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**Sample receipt non conformances and comments:**

None

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

None

**Analytical non conformances and comments:**

Batch: LBA-3115435 BTEX by EPA 8021B

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

Batch: LBA-3115436 BTEX by EPA 8021B

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

Batch: LBA-3115455 Chloride by EPA 300

Lab Sample ID 651175-001 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: 651144-001, -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-3115584 Chloride by EPA 300

Lab Sample ID 651144-023 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: 651144-013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025.

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



# Certificate of Analysis Summary 651144

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Mon Feb-03-20 02:47 pm

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651144-001       | 651144-002       | 651144-003       | 651144-004       | 651144-005       | 651144-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS01             | FS02             | FS03             | FS04             | FS05             | FS06             |
|                                    | <i>Depth:</i>     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jan-31-20 11:37  | Jan-31-20 11:40  | Jan-31-20 11:43  | Jan-31-20 11:45  | Jan-31-20 11:49  | Jan-31-20 11:51  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 16:10  | Feb-03-20 18:06  | Feb-03-20 18:26  | Feb-03-20 18:47  | Feb-03-20 19:07  | Feb-03-20 19:28  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| Toluene                            |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| m,p-Xylenes                        |                   | <0.00399 0.00399 | <0.00397 0.00397 | <0.00403 0.00403 | <0.00395 0.00395 | <0.00398 0.00398 | <0.00400 0.00400 |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00198 0.00198 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  |
|                                    | <i>Analyzed:</i>  | Feb-04-20 08:24  | Feb-04-20 08:30  | Feb-04-20 08:35  | Feb-04-20 08:52  | Feb-04-20 08:58  | Feb-04-20 09:14  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 1130 50.1        | 1290 50.4        | 834 49.9         | 1420 10.1        | 1980 10.0        | 852 10.1         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-03-20 15:40  | Feb-03-20 15:40  | Feb-03-20 15:40  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 18:53  | Feb-03-20 19:14  | Feb-03-20 19:14  | Feb-03-20 20:55  | Feb-03-20 20:55  | Feb-03-20 21:15  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.1 50.1       | <50.0 50.0       | <49.8 49.8       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       |
| Diesel Range Organics (DRO)        |                   | <50.1 50.1       | <50.0 50.0       | <49.8 49.8       | 140 49.8         | 50.3 50.0        | 71.3 50.0        |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.1 50.1       | <50.0 50.0       | <49.8 49.8       | 78.1 49.8        | <50.0 50.0       | 70.3 50.0        |
| Total GRO-DRO                      |                   | <50.1 50.1       | <50.0 50.0       | <49.8 49.8       | 140 49.8         | 50.3 50.0        | 71.3 50.0        |
| Total TPH                          |                   | <50.1 50.1       | <50.0 50.0       | <49.8 49.8       | 218 49.8         | 50.3 50.0        | 142 50.0         |

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  
Project Assistant



# Certificate of Analysis Summary 651144

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Mon Feb-03-20 02:47 pm

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651144-007       | 651144-008       | 651144-009       | 651144-010       | 651144-011       | 651144-012       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS07             | FS08             | FS09             | FS10             | FS11             | FS12             |
|                                    | <i>Depth:</i>     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jan-31-20 11:54  | Jan-31-20 11:56  | Jan-31-20 11:58  | Jan-31-20 12:01  | Jan-31-20 12:05  | Jan-31-20 12:08  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 19:48  | Feb-03-20 20:08  | Feb-03-20 20:29  | Feb-03-20 20:49  | Feb-03-20 21:50  | Feb-03-20 22:11  |
|                                    | <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 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00395 0.00395 | <0.00401 0.00401 | <0.00398 0.00398 | <0.00402 0.00402 | <0.00398 0.00398 |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00201 0.00201 | <0.00199 0.00199 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  | Feb-03-20 17:30  |
|                                    | <i>Analyzed:</i>  | Feb-04-20 09:20  | Feb-04-20 09:25  | Feb-04-20 09:31  | Feb-04-20 09:37  | Feb-04-20 09:42  | Feb-04-20 09:48  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 933 10.1         | 758 9.98         | 1120 9.92        | 684 9.98         | 911 9.98         | 1960 9.98        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 21:15  | Feb-03-20 21:36  | Feb-03-20 21:36  | Feb-03-20 21:56  | Feb-03-20 21:56  | Feb-03-20 22:16  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.2 50.2       | <50.1 50.1       | <50.2 50.2       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       |
| Diesel Range Organics (DRO)        |                   | <50.2 50.2       | 78.6 50.1        | 97.6 50.2        | 66.7 49.9        | <50.0 50.0       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.2 50.2       | <50.1 50.1       | <50.2 50.2       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       |
| Total GRO-DRO                      |                   | <50.2 50.2       | 78.6 50.1        | 97.6 50.2        | 66.7 49.9        | <50.0 50.0       | <49.9 49.9       |
| Total TPH                          |                   | <50.2 50.2       | 78.6 50.1        | 97.6 50.2        | 66.7 49.9        | <50.0 50.0       | <49.9 49.9       |

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Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 651144

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Mon Feb-03-20 02:47 pm

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651144-013       | 651144-014       | 651144-015       | 651144-016       | 651144-017       | 651144-018       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS13             | FS14             | FS15             | FS16             | FS17             | FS18             |
|                                    | <i>Depth:</i>     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jan-31-20 12:11  | Jan-31-20 12:54  | Jan-31-20 13:12  | Jan-31-20 13:17  | Jan-31-20 13:19  | Jan-31-20 13:22  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 22:31  | Feb-03-20 22:52  | Feb-03-20 23:12  | Feb-03-20 23:32  | Feb-03-20 23:53  | Feb-04-20 00:13  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Toluene                            |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| m,p-Xylenes                        |                   | <0.00401 0.00401 | <0.00399 0.00399 | <0.00402 0.00402 | <0.00400 0.00400 | <0.00402 0.00402 | <0.00403 0.00403 |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00200 0.00200 | <0.00201 0.00201 | <0.00202 0.00202 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  |
|                                    | <i>Analyzed:</i>  | Feb-04-20 10:21  | Feb-04-20 10:39  | Feb-04-20 10:45  | Feb-04-20 10:50  | Feb-04-20 10:56  | Feb-04-20 11:31  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 2640 49.9        | 796 9.94         | 387 9.98         | 1350 9.88        | 803 10.0         | 646 9.96         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 22:36  | Feb-03-20 22:36  | Feb-03-20 22:57  | Feb-03-20 22:57  | Feb-03-20 23:17  | Feb-03-20 23:17  |
|                                    | <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)  |                   | <50.3 50.3       | <49.9 49.9       | <50.3 50.3       | <50.2 50.2       | <49.8 49.8       | <50.2 50.2       |
| Diesel Range Organics (DRO)        |                   | 52.6 50.3        | <49.9 49.9       | 166 50.3         | <50.2 50.2       | 118 49.8         | <50.2 50.2       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.3 50.3       | <49.9 49.9       | <50.3 50.3       | <50.2 50.2       | <49.8 49.8       | <50.2 50.2       |
| Total GRO-DRO                      |                   | 52.6 50.3        | <49.9 49.9       | 166 50.3         | <50.2 50.2       | 118 49.8         | <50.2 50.2       |
| Total TPH                          |                   | 52.6 50.3        | <49.9 49.9       | 166 50.3         | <50.2 50.2       | 118 49.8         | <50.2 50.2       |

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

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 651144

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Mon Feb-03-20 02:47 pm

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651144-019       | 651144-020       | 651144-021       | 651144-022       | 651144-023       | 651144-024       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS19             | FS20             | FS21             | FS22             | FS23             | FS24             |
|                                    | <i>Depth:</i>     | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          | 0.5- ft          |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Jan-31-20 13:26  | Jan-31-20 13:54  | Jan-31-20 13:57  | Jan-31-20 14:05  | Jan-31-20 14:12  | Jan-31-20 14:15  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  |
|                                    | <i>Analyzed:</i>  | Feb-04-20 00:34  | Feb-04-20 00:54  | Feb-03-20 19:02  | Feb-03-20 19:22  | Feb-03-20 19:42  | Feb-03-20 20:03  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| Toluene                            |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| Ethylbenzene                       |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| m,p-Xylenes                        |                   | <0.00404 0.00404 | <0.00395 0.00395 | <0.00400 0.00400 | <0.00403 0.00403 | <0.00398 0.00398 | <0.00397 0.00397 |
| o-Xylene                           |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| Total Xylenes                      |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| Total BTEX                         |                   | <0.00202 0.00202 | <0.00198 0.00198 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00199 0.00199 | <0.00198 0.00198 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  | Feb-04-20 07:00  |
|                                    | <i>Analyzed:</i>  | Feb-04-20 11:37  | Feb-04-20 11:42  | Feb-04-20 11:48  | Feb-04-20 11:53  | Feb-04-20 11:59  | Feb-04-20 12:16  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 1060 49.9        | 647 49.8         | 799 49.4         | 599 49.9         | 813 50.0         | 2910 49.9        |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 16:00  | Feb-03-20 17:15  | Feb-04-20 12:00  |
|                                    | <i>Analyzed:</i>  | Feb-03-20 23:37  | Feb-03-20 23:37  | Feb-03-20 23:57  | Feb-03-20 23:57  | Feb-04-20 06:59  | Feb-04-20 16:03  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.3 50.3       | <49.8 49.8       | <50.0 50.0       | <50.1 50.1       | <50.2 50.2       | <50.2 50.2       |
| Diesel Range Organics (DRO)        |                   | 59.6 50.3        | <49.8 49.8       | <50.0 50.0       | <50.1 50.1       | 71.7 50.2        | <50.2 50.2       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.3 50.3       | <49.8 49.8       | <50.0 50.0       | <50.1 50.1       | <50.2 50.2       | <50.2 50.2       |
| Total GRO-DRO                      |                   | 59.6 50.3        | <49.8 49.8       | <50.0 50.0       | <50.1 50.1       | 71.7 50.2        | <50.2 50.2       |
| Total TPH                          |                   | 59.6 50.3        | <49.8 49.8       | <50.0 50.0       | <50.1 50.1       | 71.7 50.2        | <50.2 50.2       |

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  
Project Assistant



# Certificate of Analysis Summary 651144

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW

Project Id: 012920009

Contact: Dan Moir

Project Location: Lea

Date Received in Lab: Mon Feb-03-20 02:47 pm

Report Date: 06-FEB-20

Project Manager: Jessica Kramer

|                                    |                   |                  |  |  |  |  |  |
|------------------------------------|-------------------|------------------|--|--|--|--|--|
| <b>Analysis Requested</b>          | <b>Lab Id:</b>    | 651144-025       |  |  |  |  |  |
|                                    | <b>Field Id:</b>  | FS25             |  |  |  |  |  |
|                                    | <b>Depth:</b>     | 0.5- ft          |  |  |  |  |  |
|                                    | <b>Matrix:</b>    | SOIL             |  |  |  |  |  |
|                                    | <b>Sampled:</b>   | Jan-31-20 14:18  |  |  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <b>Extracted:</b> | Feb-03-20 16:00  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Feb-03-20 20:24  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Benzene                            |                   | <0.00200 0.00200 |  |  |  |  |  |
| Toluene                            |                   | <0.00200 0.00200 |  |  |  |  |  |
| Ethylbenzene                       |                   | <0.00200 0.00200 |  |  |  |  |  |
| m,p-Xylenes                        |                   | <0.00401 0.00401 |  |  |  |  |  |
| o-Xylene                           |                   | <0.00200 0.00200 |  |  |  |  |  |
| Total Xylenes                      |                   | <0.00200 0.00200 |  |  |  |  |  |
| Total BTEX                         |                   | <0.00200 0.00200 |  |  |  |  |  |
| <b>Chloride by EPA 300</b>         | <b>Extracted:</b> | Feb-04-20 07:00  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Feb-04-20 12:21  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Chloride                           |                   | 2790 49.4        |  |  |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <b>Extracted:</b> | Feb-04-20 12:00  |  |  |  |  |  |
|                                    | <b>Analyzed:</b>  | Feb-04-20 16:03  |  |  |  |  |  |
|                                    | <b>Units/RL:</b>  | mg/kg RL         |  |  |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <49.9 49.9       |  |  |  |  |  |
| Diesel Range Organics (DRO)        |                   | 73.3 49.9        |  |  |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <49.9 49.9       |  |  |  |  |  |
| Total GRO-DRO                      |                   | 73.3 49.9        |  |  |  |  |  |
| Total TPH                          |                   | 73.3 49.9        |  |  |  |  |  |

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  
Project Assistant



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS01** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-001 Date Collected: 01.31.20 11.37 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1130   | 50.1 | mg/kg | 02.04.20 08.24 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 15.40 Basis: Wet Weight  
 Seq Number: 3115422

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.1  | 50.1 | mg/kg | 02.03.20 18.53 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.1  | 50.1 | mg/kg | 02.03.20 18.53 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.1  | 50.1 | mg/kg | 02.03.20 18.53 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.1  | 50.1 | mg/kg | 02.03.20 18.53 | U    | 1   |
| Total TPH                          | PHC635     | <50.1  | 50.1 | mg/kg | 02.03.20 18.53 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 02.03.20 18.53 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 02.03.20 18.53 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS01**  
 Lab Sample Id: 651144-001

Matrix: Soil  
 Date Collected: 01.31.20 11.37

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 16.10       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 02.03.20 16.10       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 16.10       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS02** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-002 Date Collected: 01.31.20 11.40 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1290   | 50.4 | mg/kg | 02.04.20 08.30 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 15.40 Basis: Wet Weight  
 Seq Number: 3115422

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.03.20 19.14 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.03.20 19.14 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 02.03.20 19.14 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS02**  
 Lab Sample Id: 651144-002

Matrix: Soil  
 Date Collected: 01.31.20 11.40

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.06       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 02.03.20 18.06       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 02.03.20 18.06       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS03** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-003 Date Collected: 01.31.20 11.43 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 834    | 49.9 | mg/kg | 02.04.20 08.35 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 15.40 Basis: Wet Weight  
 Seq Number: 3115422

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 02.03.20 19.14 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 02.03.20 19.14 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 89         | %     | 70-135 | 02.03.20 19.14 |      |
| o-Terphenyl    | 84-15-1    | 90         | %     | 70-135 | 02.03.20 19.14 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS03**  
 Lab Sample Id: 651144-003

Matrix: Soil  
 Date Collected: 01.31.20 11.43

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.03.20 18.26       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 02.03.20 18.26       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 97                | %            | 70-130        | 02.03.20 18.26       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS04** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-004 Date Collected: 01.31.20 11.45 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1420   | 10.1 | mg/kg | 02.04.20 08.52 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 02.03.20 20.55 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 140    | 49.8 | mg/kg | 02.03.20 20.55 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 78.1   | 49.8 | mg/kg | 02.03.20 20.55 |      | 1   |
| Total GRO-DRO                      | PHC628     | 140    | 49.8 | mg/kg | 02.03.20 20.55 |      | 1   |
| Total TPH                          | PHC635     | 218    | 49.8 | mg/kg | 02.03.20 20.55 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 113        | %     | 70-135 | 02.03.20 20.55 |      |
| o-Terphenyl    | 84-15-1    | 118        | %     | 70-135 | 02.03.20 20.55 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS04**  
 Lab Sample Id: 651144-004

Matrix: Soil  
 Date Collected: 01.31.20 11.45

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3115435

Date Prep: 02.03.20 16.00

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         | 02.03.20 18.47       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00395          | 0.00395      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 02.03.20 18.47       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 103               | %            | 70-130        | 02.03.20 18.47       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 02.03.20 18.47       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS05**  
Lab Sample Id: 651144-005

Matrix: Soil  
Date Collected: 01.31.20 11.49

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115455

Date Prep: 02.03.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1980   | 10.0 | mg/kg | 02.04.20 08.58 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0       | 50.0 | mg/kg | 02.03.20 20.55 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>50.3</b> | 50.0 | mg/kg | 02.03.20 20.55 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0       | 50.0 | mg/kg | 02.03.20 20.55 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>50.3</b> | 50.0 | mg/kg | 02.03.20 20.55 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>50.3</b> | 50.0 | mg/kg | 02.03.20 20.55 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 02.03.20 20.55 |      |
| o-Terphenyl    | 84-15-1    | 98         | %     | 70-135 | 02.03.20 20.55 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS05**  
 Lab Sample Id: 651144-005

Matrix: Soil  
 Date Collected: 01.31.20 11.49

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.07       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 19.07       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 19.07       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS06**  
Lab Sample Id: 651144-006

Matrix: Soil  
Date Collected: 01.31.20 11.51

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115455

Date Prep: 02.03.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 852    | 10.1 | mg/kg | 02.04.20 09.14 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.03.20 21.15 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 71.3   | 50.0 | mg/kg | 02.03.20 21.15 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 70.3   | 50.0 | mg/kg | 02.03.20 21.15 |      | 1   |
| Total GRO-DRO                      | PHC628     | 71.3   | 50.0 | mg/kg | 02.03.20 21.15 |      | 1   |
| Total TPH                          | PHC635     | 142    | 50.0 | mg/kg | 02.03.20 21.15 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 02.03.20 21.15 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 02.03.20 21.15 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS06** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-006 Date Collected: 01.31.20 11.51 Sample Depth: 0.5 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.28       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 02.03.20 19.28       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 96                | %            | 70-130        | 02.03.20 19.28       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS07** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-007 Date Collected: 01.31.20 11.54 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 933    | 10.1 | mg/kg | 02.04.20 09.20 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 02.03.20 21.15 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 02.03.20 21.15 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 02.03.20 21.15 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 02.03.20 21.15 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 02.03.20 21.15 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 103        | %     | 70-135 | 02.03.20 21.15 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 02.03.20 21.15 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS07**  
 Lab Sample Id: 651144-007

Matrix: Soil  
 Date Collected: 01.31.20 11.54

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.48       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 02.03.20 19.48       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 19.48       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS08**  
Lab Sample Id: 651144-008

Matrix: Soil  
Date Collected: 01.31.20 11.56

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115455

Date Prep: 02.03.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 758    | 9.98 | mg/kg | 02.04.20 09.25 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.1       | 50.1 | mg/kg | 02.03.20 21.36 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>78.6</b> | 50.1 | mg/kg | 02.03.20 21.36 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.1       | 50.1 | mg/kg | 02.03.20 21.36 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>78.6</b> | 50.1 | mg/kg | 02.03.20 21.36 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>78.6</b> | 50.1 | mg/kg | 02.03.20 21.36 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 106        | %     | 70-135 | 02.03.20 21.36 |      |
| o-Terphenyl    | 84-15-1    | 112        | %     | 70-135 | 02.03.20 21.36 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS08**  
 Lab Sample Id: 651144-008

Matrix: Soil  
 Date Collected: 01.31.20 11.56

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00395          | 0.00395      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.08       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 20.08       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 102               | %            | 70-130        | 02.03.20 20.08       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS09** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-009 Date Collected: 01.31.20 11.58 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1120   | 9.92 | mg/kg | 02.04.20 09.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2       | 50.2 | mg/kg | 02.03.20 21.36 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>97.6</b> | 50.2 | mg/kg | 02.03.20 21.36 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2       | 50.2 | mg/kg | 02.03.20 21.36 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>97.6</b> | 50.2 | mg/kg | 02.03.20 21.36 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>97.6</b> | 50.2 | mg/kg | 02.03.20 21.36 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 100        | %     | 70-135 | 02.03.20 21.36 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 02.03.20 21.36 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS09**  
 Lab Sample Id: 651144-009

Matrix: Soil  
 Date Collected: 01.31.20 11.58

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.29       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 20.29       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 20.29       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS10**  
Lab Sample Id: 651144-010

Matrix: Soil  
Date Collected: 01.31.20 12.01

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115455

Date Prep: 02.03.20 17.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 684    | 9.98 | mg/kg | 02.04.20 09.37 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.03.20 21.56 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 66.7   | 49.9 | mg/kg | 02.03.20 21.56 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.03.20 21.56 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | 66.7   | 49.9 | mg/kg | 02.03.20 21.56 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | 66.7   | 49.9 | mg/kg | 02.03.20 21.56 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 105        | %     | 70-135 | 02.03.20 21.56 |      |
| o-Terphenyl    | 84-15-1    | 112        | %     | 70-135 | 02.03.20 21.56 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS10**  
Lab Sample Id: 651144-010

Matrix: Soil  
Date Collected: 01.31.20 12.01

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.03.20 20.49       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 20.49       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 02.03.20 20.49       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS11** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-011 Date Collected: 01.31.20 12.05 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.03.20 17.30 Basis: Wet Weight  
 Seq Number: 3115455

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 911    | 9.98 | mg/kg | 02.04.20 09.42 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.03.20 21.56 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.03.20 21.56 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.03.20 21.56 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.03.20 21.56 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.03.20 21.56 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 02.03.20 21.56 |      |
| o-Terphenyl    | 84-15-1    | 92         | %     | 70-135 | 02.03.20 21.56 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS11**  
 Lab Sample Id: 651144-011

Matrix: Soil  
 Date Collected: 01.31.20 12.05

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.03.20 21.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 21.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 02.03.20 21.50       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS12** Matrix: **Soil** Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-012 Date Collected: 01.31.20 12.08 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: **MAB** % Moisture:  
 Analyst: **MAB** Date Prep: 02.03.20 17.30 Basis: **Wet Weight**  
 Seq Number: 3115455

| Parameter | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|-------------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | <b>1960</b> | 9.98 | mg/kg | 02.04.20 09.48 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: **DTH** % Moisture:  
 Analyst: **DTH** Date Prep: 02.03.20 16.00 Basis: **Wet Weight**  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.03.20 22.16 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.03.20 22.16 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.03.20 22.16 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.03.20 22.16 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.03.20 22.16 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 02.03.20 22.16 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 02.03.20 22.16 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS12** Matrix: **Soil** Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-012 Date Collected: 01.31.20 12.08 Sample Depth: 0.5 ft  
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B  
 Tech: **MAB** % Moisture:  
 Analyst: **MAB** Date Prep: 02.03.20 16.00 Basis: **Wet Weight**  
 Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.03.20 22.11       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 02.03.20 22.11       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 02.03.20 22.11       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: FS13  
Lab Sample Id: 651144-013

Matrix: Soil  
Date Collected: 01.31.20 12.11

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2640   | 49.9 | mg/kg | 02.04.20 10.21 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 52.6   | 50.3 | mg/kg | 02.03.20 22.36 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Total GRO-DRO                      | PHC628     | 52.6   | 50.3 | mg/kg | 02.03.20 22.36 |      | 1   |
| Total TPH                          | PHC635     | 52.6   | 50.3 | mg/kg | 02.03.20 22.36 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 106        | %     | 70-135 | 02.03.20 22.36 |      |
| o-Terphenyl    | 84-15-1    | 111        | %     | 70-135 | 02.03.20 22.36 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS13**  
 Lab Sample Id: 651144-013

Matrix: Soil  
 Date Collected: 01.31.20 12.11

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.31       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 103               | %            | 70-130        | 02.03.20 22.31       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 22.31       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS14**  
Lab Sample Id: 651144-014

Matrix: Soil  
Date Collected: 01.31.20 12.54

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 796    | 9.94 | mg/kg | 02.04.20 10.39 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.03.20 22.36 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.03.20 22.36 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 02.03.20 22.36 |      |
| o-Terphenyl    | 84-15-1    | 93         | %     | 70-135 | 02.03.20 22.36 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS14**  
 Lab Sample Id: 651144-014

Matrix: Soil  
 Date Collected: 01.31.20 12.54

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 22.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 101               | %            | 70-130        | 02.03.20 22.52       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 02.03.20 22.52       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: FS15  
Lab Sample Id: 651144-015

Matrix: Soil  
Date Collected: 01.31.20 13.12

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 387    | 9.98 | mg/kg | 02.04.20 10.45 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 166    | 50.3 | mg/kg | 02.03.20 22.57 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Total GRO-DRO                      | PHC628     | 166    | 50.3 | mg/kg | 02.03.20 22.57 |      | 1   |
| Total TPH                          | PHC635     | 166    | 50.3 | mg/kg | 02.03.20 22.57 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 02.03.20 22.57 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 02.03.20 22.57 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS15**  
 Lab Sample Id: 651144-015

Matrix: Soil  
 Date Collected: 01.31.20 13.12

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 02.03.20 23.12       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 23.12       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS16**  
Lab Sample Id: 651144-016

Matrix: Soil  
Date Collected: 01.31.20 13.17

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1350   | 9.88 | mg/kg | 02.04.20 10.50 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115446

Date Prep: 02.03.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 02.03.20 22.57 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 02.03.20 22.57 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 99         | %     | 70-135 | 02.03.20 22.57 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 02.03.20 22.57 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS16**  
 Lab Sample Id: 651144-016

Matrix: Soil  
 Date Collected: 01.31.20 13.17

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 23.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 02.03.20 23.32       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 23.32       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS17** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-017 Date Collected: 01.31.20 13.19 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 803    | 10.0 | mg/kg | 02.04.20 10.56 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result     | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8      | 49.8 | mg/kg | 02.03.20 23.17 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>118</b> | 49.8 | mg/kg | 02.03.20 23.17 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8      | 49.8 | mg/kg | 02.03.20 23.17 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>118</b> | 49.8 | mg/kg | 02.03.20 23.17 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>118</b> | 49.8 | mg/kg | 02.03.20 23.17 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 103        | %     | 70-135 | 02.03.20 23.17 |      |
| o-Terphenyl    | 84-15-1    | 107        | %     | 70-135 | 02.03.20 23.17 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS17**  
Lab Sample Id: 651144-017

Matrix: Soil  
Date Collected: 01.31.20 13.19

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.03.20 23.53       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.03.20 23.53       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.03.20 23.53       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS18** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-018 Date Collected: 01.31.20 13.22 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 646    | 9.96 | mg/kg | 02.04.20 11.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 02.03.20 23.17 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 02.03.20 23.17 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 02.03.20 23.17 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 02.03.20 23.17 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 02.03.20 23.17 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 02.03.20 23.17 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 02.03.20 23.17 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS18**  
 Lab Sample Id: 651144-018

Matrix: Soil  
 Date Collected: 01.31.20 13.22

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.13       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 02.04.20 00.13       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 102               | %            | 70-130        | 02.04.20 00.13       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS19** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-019 Date Collected: 01.31.20 13.26 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1060   | 49.9 | mg/kg | 02.04.20 11.37 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.3  | 50.3 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 59.6   | 50.3 | mg/kg | 02.03.20 23.37 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.3  | 50.3 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Total GRO-DRO                      | PHC628     | 59.6   | 50.3 | mg/kg | 02.03.20 23.37 |      | 1   |
| Total TPH                          | PHC635     | 59.6   | 50.3 | mg/kg | 02.03.20 23.37 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 109        | %     | 70-135 | 02.03.20 23.37 |      |
| o-Terphenyl    | 84-15-1    | 112        | %     | 70-135 | 02.03.20 23.37 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS19**  
Lab Sample Id: 651144-019

Matrix: Soil  
Date Collected: 01.31.20 13.26

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.04.20 00.34       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 102               | %            | 70-130        | 02.04.20 00.34       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 105               | %            | 70-130        | 02.04.20 00.34       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS20** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-020 Date Collected: 01.31.20 13.54 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 647    | 49.8 | mg/kg | 02.04.20 11.42 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 02.03.20 23.37 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 02.03.20 23.37 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.03.20 23.37 |      |
| o-Terphenyl    | 84-15-1    | 95         | %     | 70-135 | 02.03.20 23.37 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS20**  
 Lab Sample Id: 651144-020

Matrix: Soil  
 Date Collected: 01.31.20 13.54

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115435

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00395          | 0.00395      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 02.04.20 00.54       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 02.04.20 00.54       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 02.04.20 00.54       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: FS21 Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-021 Date Collected: 01.31.20 13.57 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 799    | 49.4 | mg/kg | 02.04.20 11.48 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.03.20 23.57 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 02.03.20 23.57 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 02.03.20 23.57 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS21**  
 Lab Sample Id: 651144-021

Matrix: Soil  
 Date Collected: 01.31.20 13.57

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115436

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 19.02       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.03.20 19.02       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 96                | %            | 70-130        | 02.03.20 19.02       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: FS22 Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-022 Date Collected: 01.31.20 14.05 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 599    | 49.9 | mg/kg | 02.04.20 11.53 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.03.20 16.00 Basis: Wet Weight  
 Seq Number: 3115446

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.1  | 50.1 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.1  | 50.1 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.1  | 50.1 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.1  | 50.1 | mg/kg | 02.03.20 23.57 | U    | 1   |
| Total TPH                          | PHC635     | <50.1  | 50.1 | mg/kg | 02.03.20 23.57 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.03.20 23.57 |      |
| o-Terphenyl    | 84-15-1    | 94         | %     | 70-135 | 02.03.20 23.57 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: FS22  
Lab Sample Id: 651144-022

Matrix: Soil  
Date Collected: 01.31.20 14.05

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115436

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.03.20 19.22       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 111               | %            | 70-130        | 02.03.20 19.22       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 95                | %            | 70-130        | 02.03.20 19.22       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: FS23  
Lab Sample Id: 651144-023

Matrix: Soil  
Date Collected: 01.31.20 14.12

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 813    | 50.0 | mg/kg | 02.04.20 11.59 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115466

Date Prep: 02.03.20 17.15

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 02.04.20 06.59 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 71.7   | 50.2 | mg/kg | 02.04.20 06.59 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 02.04.20 06.59 | U    | 1   |
| Total GRO-DRO                      | PHC628     | 71.7   | 50.2 | mg/kg | 02.04.20 06.59 |      | 1   |
| Total TPH                          | PHC635     | 71.7   | 50.2 | mg/kg | 02.04.20 06.59 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 02.04.20 06.59 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 02.04.20 06.59 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS23**  
 Lab Sample Id: 651144-023

Matrix: Soil  
 Date Collected: 01.31.20 14.12

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115436

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.03.20 19.42       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 91                | %            | 70-130        | 02.03.20 19.42       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.03.20 19.42       |             |     |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: **FS24** Matrix: Soil Date Received: 02.03.20 14.47  
 Lab Sample Id: 651144-024 Date Collected: 01.31.20 14.15 Sample Depth: 0.5 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: MAB % Moisture:  
 Analyst: MAB Date Prep: 02.04.20 07.00 Basis: Wet Weight  
 Seq Number: 3115584

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2910   | 49.9 | mg/kg | 02.04.20 12.16 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DTH % Moisture:  
 Analyst: DTH Date Prep: 02.04.20 12.00 Basis: Wet Weight  
 Seq Number: 3115592

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.2  | 50.2 | mg/kg | 02.04.20 16.03 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.2  | 50.2 | mg/kg | 02.04.20 16.03 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.2  | 50.2 | mg/kg | 02.04.20 16.03 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.2  | 50.2 | mg/kg | 02.04.20 16.03 | U    | 1   |
| Total TPH                          | PHC635     | <50.2  | 50.2 | mg/kg | 02.04.20 16.03 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 108        | %     | 70-135 | 02.04.20 16.03 |      |
| o-Terphenyl    | 84-15-1    | 114        | %     | 70-135 | 02.04.20 16.03 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: **FS24**  
 Lab Sample Id: 651144-024

Matrix: Soil  
 Date Collected: 01.31.20 14.15

Date Received: 02.03.20 14.47  
 Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115436

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 02.03.20 20.03       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 97                | %            | 70-130        | 02.03.20 20.03       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.03.20 20.03       |             |     |



# Certificate of Analytical Results 651144

LT Environmental, Inc., Arvada, CO

EMSU WSW

Sample Id: FS25  
Lab Sample Id: 651144-025

Matrix: Soil  
Date Collected: 01.31.20 14.18

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300

Tech: MAB

Analyst: MAB

Seq Number: 3115584

Date Prep: 02.04.20 07.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 2790   | 49.4 | mg/kg | 02.04.20 12.21 |      | 5   |

Analytical Method: TPH by SW8015 Mod

Tech: DTH

Analyst: DTH

Seq Number: 3115592

Date Prep: 02.04.20 12.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.04.20 16.03 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | 73.3   | 49.9 | mg/kg | 02.04.20 16.03 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.04.20 16.03 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | 73.3   | 49.9 | mg/kg | 02.04.20 16.03 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | 73.3   | 49.9 | mg/kg | 02.04.20 16.03 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 02.04.20 16.03 |      |
| o-Terphenyl    | 84-15-1    | 91         | %     | 70-135 | 02.04.20 16.03 |      |



# Certificate of Analytical Results 651144

## LT Environmental, Inc., Arvada, CO

### EMSU WSW

Sample Id: FS25  
Lab Sample Id: 651144-025

Matrix: Soil  
Date Collected: 01.31.20 14.18

Date Received: 02.03.20 14.47  
Sample Depth: 0.5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 02.03.20 16.00

Basis: Wet Weight

Seq Number: 3115436

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.03.20 20.24       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 110               | %            | 70-130        | 02.03.20 20.24       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 98                | %            | 70-130        | 02.03.20 20.24       |             |     |



## Flagging Criteria

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

**\*\*** Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

**+** NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
**EMSU WSW**

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115455

MB Sample Id: 7695873-1-BLK

Matrix: Solid

LCS Sample Id: 7695873-1-BKS

Prep Method: E300P

Date Prep: 02.03.20

LCSD Sample Id: 7695873-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 238        | 95       | 252         | 101       | 90-110 | 6    | 20        | mg/kg | 02.03.20 21:38 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115584

MB Sample Id: 7695876-1-BLK

Matrix: Solid

LCS Sample Id: 7695876-1-BKS

Prep Method: E300P

Date Prep: 02.04.20

LCSD Sample Id: 7695876-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <10.0     | 250          | 258        | 103      | 264         | 106       | 90-110 | 2    | 20        | mg/kg | 02.05.20 10:10 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115455

Parent Sample Id: 651144-003

Matrix: Soil

MS Sample Id: 651144-003 S

Prep Method: E300P

Date Prep: 02.03.20

MSD Sample Id: 651144-003 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 834           | 200          | 999       | 83      | 1020       | 93       | 90-110 | 2    | 20        | mg/kg | 02.04.20 08:41 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115455

Parent Sample Id: 651175-001

Matrix: Soil

MS Sample Id: 651175-001 S

Prep Method: E300P

Date Prep: 02.03.20

MSD Sample Id: 651175-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 3920          | 199          | 4140      | 111     | 4140       | 110      | 90-110 | 0    | 20        | mg/kg | 02.03.20 21:55 | X    |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3115584

Parent Sample Id: 651144-013

Matrix: Soil

MS Sample Id: 651144-013 S

Prep Method: E300P

Date Prep: 02.04.20

MSD Sample Id: 651144-013 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 2640          | 203          | 2810      | 84      | 2800       | 79       | 90-110 | 0    | 20        | mg/kg | 02.04.20 10:27 | 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



## LT Environmental, Inc.

## EMSU WSW

## Analytical Method: Chloride by EPA 300

Seq Number: 3115584

Parent Sample Id: 651144-023

Matrix: Soil

MS Sample Id: 651144-023 S

Prep Method: E300P

Date Prep: 02.04.20

MSD Sample Id: 651144-023 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 813           | 200          | 1030      | 109     | 1010       | 99       | 90-110 | 2    | 20        | mg/kg | 02.04.20 12:05 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115422

MB Sample Id: 7695851-1-BLK

Matrix: Solid

LCS Sample Id: 7695851-1-BKS

Prep Method: SW8015P

Date Prep: 02.03.20

LCSD Sample Id: 7695851-1-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         | 1240       | 124      | 1130        | 113       | 70-135 | 9    | 35        | mg/kg | 02.03.20 15:30 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1180       | 118      | 1130        | 113       | 70-135 | 4    | 35        | mg/kg | 02.03.20 15:30 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 102     |         | 131      |          | 114       |           | 70-135 | %     | 02.03.20 15:30 |
| o-Terphenyl    | 103     |         | 124      |          | 103       |           | 70-135 | %     | 02.03.20 15:30 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115446

MB Sample Id: 7695892-1-BLK

Matrix: Solid

LCS Sample Id: 7695892-1-BKS

Prep Method: SW8015P

Date Prep: 02.03.20

LCSD Sample Id: 7695892-1-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         | 1120       | 112      | 1060        | 106       | 70-135 | 6    | 35        | mg/kg | 02.03.20 19:54 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1160       | 116      | 1190        | 119       | 70-135 | 3    | 35        | mg/kg | 02.03.20 19:54 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 114     |         | 115      |          | 109       |           | 70-135 | %     | 02.03.20 19:54 |
| o-Terphenyl    | 110     |         | 108      |          | 103       |           | 70-135 | %     | 02.03.20 19:54 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115466

MB Sample Id: 7695908-1-BLK

Matrix: Solid

LCS Sample Id: 7695908-1-BKS

Prep Method: SW8015P

Date Prep: 02.03.20

LCSD Sample Id: 7695908-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0     | 1000         | 1110       | 111      | 1070        | 107       | 70-135 | 4    | 35        | mg/kg | 02.04.20 04:59 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1120       | 112      | 1100        | 110       | 70-135 | 2    | 35        | mg/kg | 02.04.20 04:59 |      |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 100     |         | 113      |          | 111       |           | 70-135 | %     | 02.04.20 04:59 |
| o-Terphenyl    | 98      |         | 102      |          | 100       |           | 70-135 | %     | 02.04.20 04:59 |

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.

## EMSU WSW

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115592

MB Sample Id: 7695996-1-BLK

Matrix: Solid

LCS Sample Id: 7695996-1-BKS

Prep Method: SW8015P

Date Prep: 02.04.20

LCSD Sample Id: 7695996-1-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         | 1130       | 113      | 1110        | 111       | 70-135 | 2    | 35        | mg/kg | 02.04.20 13:03 |      |
| Diesel Range Organics (DRO)       | <50.0     | 1000         | 1180       | 118      | 1120        | 112       | 70-135 | 5    | 35        | mg/kg | 02.04.20 13:03 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 109     |         | 117      |          | 113       |           | 70-135 | %     | 02.04.20 13:03 |
| o-Terphenyl    | 109     |         | 107      |          | 101       |           | 70-135 | %     | 02.04.20 13:03 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115422

Matrix: Solid

MB Sample Id: 7695851-1-BLK

Prep Method: SW8015P

Date Prep: 02.03.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 02.03.20 15:10 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115446

Matrix: Solid

MB Sample Id: 7695892-1-BLK

Prep Method: SW8015P

Date Prep: 02.03.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 02.04.20 10:21 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115466

Matrix: Solid

MB Sample Id: 7695908-1-BLK

Prep Method: SW8015P

Date Prep: 02.03.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 02.04.20 04:59 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115592

Matrix: Solid

MB Sample Id: 7695996-1-BLK

Prep Method: SW8015P

Date Prep: 02.04.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 02.04.20 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



**LT Environmental, Inc.**  
**EMSU WSW**

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115422

Parent Sample Id: 651052-012

Matrix: Soil

MS Sample Id: 651052-012 S

Prep Method: SW8015P

Date Prep: 02.03.20

MSD Sample Id: 651052-012 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0         | 999          | 1160      | 116     | 1150       | 115      | 70-135 | 1    | 35        | mg/kg | 02.03.20 15:50 |      |
| Diesel Range Organics (DRO)       | <50.0         | 999          | 1160      | 116     | 1040       | 104      | 70-135 | 11   | 35        | mg/kg | 02.03.20 15:50 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 118     |         | 120      |          | 70-135 | %     | 02.03.20 15:50 |
| o-Terphenyl    | 104     |         | 110      |          | 70-135 | %     | 02.03.20 15:50 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115446

Parent Sample Id: 651175-008

Matrix: Soil

MS Sample Id: 651175-008 S

Prep Method: SW8015P

Date Prep: 02.03.20

MSD Sample Id: 651175-008 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.1         | 1000         | 1270      | 127     | 1160       | 116      | 70-135 | 9    | 35        | mg/kg | 02.03.20 20:35 |      |
| Diesel Range Organics (DRO)       | <50.1         | 1000         | 1350      | 135     | 1180       | 118      | 70-135 | 13   | 35        | mg/kg | 02.03.20 20:35 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 126     |         | 120      |          | 70-135 | %     | 02.03.20 20:35 |
| o-Terphenyl    | 119     |         | 107      |          | 70-135 | %     | 02.03.20 20:35 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3115466

Parent Sample Id: 651175-001

Matrix: Soil

MS Sample Id: 651175-001 S

Prep Method: SW8015P

Date Prep: 02.03.20

MSD Sample Id: 651175-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.2         | 1000         | 1280      | 128     | 1160       | 116      | 70-135 | 10   | 35        | mg/kg | 02.04.20 05:39 |      |
| Diesel Range Organics (DRO)       | <50.2         | 1000         | 1190      | 119     | 1160       | 116      | 70-135 | 3    | 35        | mg/kg | 02.04.20 05:39 |      |

**Surrogate**

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 129     |         | 120      |          | 70-135 | %     | 02.04.20 05:39 |
| o-Terphenyl    | 128     |         | 106      |          | 70-135 | %     | 02.04.20 05:39 |

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.

## EMSU WSW

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3115592

Parent Sample Id: 651256-001

Matrix: Soil

MS Sample Id: 651256-001 S

Prep Method: SW8015P

Date Prep: 02.04.20

MSD Sample Id: 651256-001 SD

| Parameter                         | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <50.0         | 1000         | 1150      | 115     | 1120       | 112      | 70-135 | 3    | 35        | mg/kg | 02.04.20 13:23 |      |
| Diesel Range Organics (DRO)       | 325           | 1000         | 1160      | 84      | 1210       | 89       | 70-135 | 4    | 35        | mg/kg | 02.04.20 13:23 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 125     |         | 121      |          | 70-135 | %     | 02.04.20 13:23 |
| o-Terphenyl    | 111     |         | 116      |          | 70-135 | %     | 02.04.20 13:23 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3115435

MB Sample Id: 7695880-1-BLK

Matrix: Solid

LCS Sample Id: 7695880-1-BKS

Prep Method: SW5030B

Date Prep: 02.03.20

LCSD Sample Id: 7695880-1-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        | 0.0961     | 96       | 0.102       | 102       | 70-130 | 6    | 35        | mg/kg | 02.03.20 15:13 |      |
| Toluene      | <0.00200  | 0.100        | 0.0953     | 95       | 0.0992      | 99        | 70-130 | 4    | 35        | mg/kg | 02.03.20 15:13 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0963     | 96       | 0.0971      | 97        | 71-129 | 1    | 35        | mg/kg | 02.03.20 15:13 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.197      | 99       | 0.199       | 100       | 70-135 | 1    | 35        | mg/kg | 02.03.20 15:13 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0985     | 99       | 0.0991      | 99        | 71-133 | 1    | 35        | mg/kg | 02.03.20 15:13 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 105     |         | 102      |          | 104       |           | 70-130 | %     | 02.03.20 15:13 |
| 4-Bromofluorobenzene | 96      |         | 95       |          | 97        |           | 70-130 | %     | 02.03.20 15:13 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3115436

MB Sample Id: 7695883-1-BLK

Matrix: Solid

LCS Sample Id: 7695883-1-BKS

Prep Method: SW5030B

Date Prep: 02.03.20

LCSD Sample Id: 7695883-1-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        | 0.120      | 120      | 0.114       | 114       | 70-130 | 5    | 35        | mg/kg | 02.03.20 17:20 |      |
| Toluene      | <0.00200  | 0.100        | 0.110      | 110      | 0.105       | 105       | 70-130 | 5    | 35        | mg/kg | 02.03.20 17:20 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.107      | 107      | 0.101       | 101       | 71-129 | 6    | 35        | mg/kg | 02.03.20 17:20 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.208      | 104      | 0.197       | 99        | 70-135 | 5    | 35        | mg/kg | 02.03.20 17:20 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.105      | 105      | 0.0995      | 100       | 71-133 | 5    | 35        | mg/kg | 02.03.20 17:20 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 110     |         | 110      |          | 109       |           | 70-130 | %     | 02.03.20 17:20 |
| 4-Bromofluorobenzene | 94      |         | 93       |          | 91        |           | 70-130 | %     | 02.03.20 17:20 |

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.**  
**EMSU WSW**

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

Seq Number: 3115435

Parent Sample Id: 651144-001

Matrix: Soil

MS Sample Id: 651144-001 S

Prep Method: SW5030B

Date Prep: 02.03.20

MSD Sample Id: 651144-001 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       | 0.121     | 121     | 0.101      | 101      | 70-130 | 18   | 35        | mg/kg | 02.03.20 16:30 |      |
| Toluene      | <0.00200      | 0.0998       | 0.114     | 114     | 0.0968     | 97       | 70-130 | 16   | 35        | mg/kg | 02.03.20 16:30 |      |
| Ethylbenzene | <0.00200      | 0.0998       | 0.102     | 102     | 0.0933     | 93       | 71-129 | 9    | 35        | mg/kg | 02.03.20 16:30 |      |
| m,p-Xylenes  | <0.000752     | 0.200        | 0.207     | 104     | 0.191      | 96       | 70-135 | 8    | 35        | mg/kg | 02.03.20 16:30 |      |
| o-Xylene     | <0.00200      | 0.0998       | 0.102     | 102     | 0.0965     | 97       | 71-133 | 6    | 35        | mg/kg | 02.03.20 16:30 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 105     |         | 105      |          | 70-130 | %     | 02.03.20 16:30 |
| 4-Bromofluorobenzene | 100     |         | 96       |          | 70-130 | %     | 02.03.20 16:30 |

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

Seq Number: 3115436

Parent Sample Id: 651144-021

Matrix: Soil

MS Sample Id: 651144-021 S

Prep Method: SW5030B

Date Prep: 02.03.20

MSD Sample Id: 651144-021 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00198      | 0.0992       | 0.0782    | 79      | 0.0948     | 95       | 70-130 | 19   | 35        | mg/kg | 02.03.20 18:00 |      |
| Toluene      | <0.00198      | 0.0992       | 0.0739    | 74      | 0.0818     | 82       | 70-130 | 10   | 35        | mg/kg | 02.03.20 18:00 |      |
| Ethylbenzene | <0.00198      | 0.0992       | 0.0811    | 82      | 0.0743     | 75       | 71-129 | 9    | 35        | mg/kg | 02.03.20 18:00 |      |
| m,p-Xylenes  | <0.00397      | 0.198        | 0.177     | 89      | 0.167      | 84       | 70-135 | 6    | 35        | mg/kg | 02.03.20 18:00 |      |
| o-Xylene     | <0.00198      | 0.0992       | 0.0788    | 79      | 0.0884     | 89       | 71-133 | 11   | 35        | mg/kg | 02.03.20 18:00 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 109      |          | 70-130 | %     | 02.03.20 18:00 |
| 4-Bromofluorobenzene | 97      |         | 92       |          | 70-130 | %     | 02.03.20 18:00 |

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

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 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: 1651144

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:                |                                    |
| City, State ZIP: | Midland, Tx 79705                      | City, State ZIP:        |                                    |
| Phone:           | (432) 236-3849                         | Email:                  | wmather@ltenv.com, dmoir@ltenv.com |

|                                                                                                                                                                                                                         |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Program:</b> <input checked="" type="checkbox"/> UST/PST <input type="checkbox"/> RP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund<br><b>State of Project:</b> |                                                                                         |
| <b>Reporting Level II</b> <input type="checkbox"/> Level III <input type="checkbox"/> FT/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>                                     | <b>Deliverables:</b> EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other: |

|                 |                |             |                                     |
|-----------------|----------------|-------------|-------------------------------------|
| Project Name:   | EMSU WSW       | Turn Around | <input checked="" type="checkbox"/> |
| Project Number: | 012920009      | Routine     | <input checked="" type="checkbox"/> |
| P.O. Number:    | Lea            | Rush:       |                                     |
| Sampler's Name: | William Mather | Due Date:   |                                     |

|                       |             |                |          |                    |      |    |
|-----------------------|-------------|----------------|----------|--------------------|------|----|
| <b>SAMPLE RECEIPT</b> | Temp Blank: | Yes            | No       | Wet Ice:           | Yes  | No |
| Temperature (°C):     | 0.6         | Thermometer ID |          |                    |      |    |
| Received Intact:      | Yes         | No             | T-NM-009 |                    |      |    |
| Cooler Custody Seals: | Yes         | No             | N/A      | Correction Factor: | -0.1 |    |
| Sample Custody Seals: | Yes         | No             | N/A      | Total Containers:  | 35   |    |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers |                   |                      |   |  |  |  |  |  |  |  |  |  | Sample Comments |
|-----------------------|--------|--------------|--------------|-------|----------------------|-------------------|----------------------|---|--|--|--|--|--|--|--|--|--|-----------------|
|                       |        |              |              |       | TPH (EPA 8015)       | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |   |  |  |  |  |  |  |  |  |  |                 |
| FS01                  | S      | 1/31/2020    | 11:37        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS02                  | S      | 1/31/2020    | 11:40        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS03                  | S      | 1/31/2020    | 11:43        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS04                  | S      | 1/31/2020    | 11:45        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS05                  | S      | 1/31/2020    | 11:49        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS06                  | S      | 1/31/2020    | 11:51        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS07                  | S      | 1/31/2020    | 11:54        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS08                  | S      | 1/31/2020    | 11:56        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS09                  | S      | 1/31/2020    | 11:58        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |
| FS10                  | S      | 1/31/2020    | 12:01        | .5'   | 1                    | X                 | X                    | X |  |  |  |  |  |  |  |  |  | composite       |

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 |
| <i>[Signature]</i>           | <i>[Signature]</i>       | 2/3/20 1447 <sup>2</sup> |                              |                          |           |
|                              |                          | 4                        |                              |                          |           |
|                              |                          | 6                        |                              |                          |           |



## Chain of Custody

Work Order No: 1051144

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 2 of 3

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

|                 |                |             |  |
|-----------------|----------------|-------------|--|
| Project Name:   | EMSU WSW       | Turn Around |  |
| Project Number: | 012920009      | Routine     |  |
| P.O. Number:    | Lea            | Rush:       |  |
| Sampler's Name: | William Mather | Due Date:   |  |

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

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | ANALYSIS REQUEST     |                |                   |                      |  |  |  |  |  |  | Work Order Notes |
|-----------------------|--------|--------------|--------------|-------|----------------------|----------------|-------------------|----------------------|--|--|--|--|--|--|------------------|
|                       |        |              |              |       | Number of Containers | TPH (EPA 8015) | BTEX (EPA 0=8021) | Chloride (EPA 300.0) |  |  |  |  |  |  |                  |
| FS11                  | S      | 1/31/2020    | 12:05        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS12                  | S      | 1/31/2020    | 12:08        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS13                  | S      | 1/31/2020    | 12:11        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS14                  | S      | 1/31/2020    | 12:54        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS15                  | S      | 1/31/2020    | 13:12        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS16                  | S      | 1/31/2020    | 13:17        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS17                  | S      | 1/31/2020    | 13:19        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS18                  | S      | 1/31/2020    | 13:22        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS19                  | S      | 1/31/2020    | 13:26        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |
| FS20                  | S      | 1/31/2020    | 13:54        | .5'   | 1                    | X              | X                 | X                    |  |  |  |  |  |  | composite        |

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

|                                              |                                                                        |                      |                                                                                   |
|----------------------------------------------|------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------|
| 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 |
|                              |                          | 2/6/20 14:47 |                              |                          |           |



Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-333-  
Midland, TX (432-704-5440) EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813) 233-3333  
Hobbs, NM (575-382-7550)

Work Order No: 051144

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## Chain of Custody

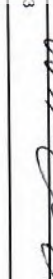
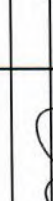
|                  |  |                                        |                         |                                                                                                                   |
|------------------|--|----------------------------------------|-------------------------|-------------------------------------------------------------------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

|                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Work Order Comments</b>                                                                                                                                                                 |  |
| Program: <b>UST/PST</b> <input type="checkbox"/> RP <input type="checkbox"/> Growfields <input checked="" type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/> |  |
| State of Project:                                                                                                                                                                          |  |
| Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RP <input type="checkbox"/> Level IV <input type="checkbox"/>              |  |
| Deliverables: EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: <input type="checkbox"/>                                                                                  |  |

| ANALYSIS REQUEST                                              |                |     |                |                    |        |
|---------------------------------------------------------------|----------------|-----|----------------|--------------------|--------|
|                                                               |                |     |                | Work Order Notes   |        |
| Project Name:                                                 | EMSU WSW       |     | Turn Around    |                    |        |
| Project Number:                                               | J 12920009     |     | Routine        | H                  |        |
| P.O. Number:                                                  | Lea            |     | Rush:          |                    |        |
| Sampler's Name:                                               | William Mather |     | Due Date:      |                    |        |
| <b>SAMPLE RECEIPT</b>                                         |                |     |                |                    |        |
| Temperature (°C):                                             | Temp Blank:    | Yes | No             | Wet Ice:           | Yes No |
| Received Intact:                                              | Yes            | No  | Thermometer ID |                    |        |
| Cooler Custody Seals:                                         | Yes            | No  | N/A            | Correction Factor: |        |
| Sample Custody Seals:                                         | Yes            | No  | N/A            | Total Containers:  |        |
| Number of Containers                                          |                |     |                |                    |        |
| (EPA 8015)                                                    |                |     |                |                    |        |
| (EPA 0=8021)                                                  |                |     |                |                    |        |
| de (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.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------|------------------------------|--------------------------------------------------------------------------------------------------------|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 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) | Received by: (Signature)                                                                               | Date/Time |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 2/3/20 14:47  |                              |                                                                                                        |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        | 4         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        | 6         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Revised Date 05/14/18 Rev. 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                   |               |                              |                                                                                                        |           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Analytical Report 651875

for  
**LT Environmental, Inc.**

**Project Manager: Dan Moir**

**EMSU WSW 278**

**012920009**

**13-FEB-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



13-FEB-20

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

Reference: XENCO Report No(s): **651875**  
**EMSU WSW 278**  
Project Address:

**Dan Moir:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 651875. 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. 651875 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

---

**Jessica Kramer**  
Project 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 651875

LT Environmental, Inc., Arvada, CO

EMSU WSW 278

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| FS30      | S      | 02-07-20 10:13 | 4 ft         | 651875-001    |
| FS31      | S      | 02-07-20 10:16 | 4 ft         | 651875-002    |
| FS32      | S      | 02-07-20 10:19 | 4 ft         | 651875-003    |
| FS33      | S      | 02-07-20 10:22 | 4 ft         | 651875-004    |
| FS34      | S      | 02-07-20 10:25 | 4 ft         | 651875-005    |
| FS35      | S      | 02-07-20 10:28 | 4 ft         | 651875-006    |
| FS36      | S      | 02-07-20 10:31 | 4 ft         | 651875-007    |
| FS37      | S      | 02-07-20 10:34 | 4 ft         | 651875-008    |
| FS38      | S      | 02-07-20 10:36 | 4 ft         | 651875-009    |
| FS39      | S      | 02-07-20 10:51 | 4 ft         | 651875-010    |
| FS40      | S      | 02-07-20 12:53 | 4 ft         | 651875-011    |
| FS41      | S      | 02-07-20 12:55 | 4 ft         | 651875-012    |
| FS42      | S      | 02-07-20 12:57 | 4 ft         | 651875-013    |
| FS43      | S      | 02-07-20 13:01 | 4 ft         | 651875-014    |
| FS44      | S      | 02-07-20 13:05 | 4 ft         | 651875-015    |
| FS45      | S      | 02-07-20 13:08 | 4 ft         | 651875-016    |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW 278**

Project ID: 012920009  
Work Order Number(s): 651875

Report Date: 13-FEB-20  
Date Received: 02/10/2020

---

**Sample receipt non conformances and comments:**

---

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

None

**Analytical non conformances and comments:**

Batch: LBA-3116220 TPH by SW8015 Mod

Lab Sample ID 651875-008 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Motor Oil Range Hydrocarbons (MRO) 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: 651875-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016.

Motor Oil Range Hydrocarbons (MRO) recovered below QC limits in the Blank Spike and Duplicate indicating bias low results. Samples in the analytical batch are: 651875-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016.

Batch: LBA-3116295 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered below QC limits. Samples affected are: 7696407-1-BLK, 651875-013 SD.

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

Batch: LBA-3116350 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 651875

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

Project Id: 012920009

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Feb-10-20 03:30 pm

Report Date: 13-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651875-001       | 651875-002       | 651875-003       | 651875-004       | 651875-005       | 651875-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS30             | FS31             | FS32             | FS33             | FS34             | FS35             |
|                                    | <i>Depth:</i>     | 4- ft            | 4- ft            | 4- ft            | 4- ft            | 4- ft            | 4- ft            |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Feb-07-20 10:13  | Feb-07-20 10:16  | Feb-07-20 10:19  | Feb-07-20 10:22  | Feb-07-20 10:25  | Feb-07-20 10:28  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-12-20 10:15  | Feb-11-20 11:00  | Feb-11-20 11:00  | Feb-11-20 11:00  | Feb-11-20 11:00  | Feb-11-20 11:00  |
|                                    | <i>Analyzed:</i>  | Feb-13-20 10:04  | Feb-12-20 17:52  | Feb-12-20 18:12  | Feb-12-20 18:32  | Feb-12-20 18:52  | Feb-12-20 19:12  |
|                                    | <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 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| Toluene                            |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| Ethylbenzene                       |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| m,p-Xylenes                        |                   | <0.00400 0.00400 | <0.00402 0.00402 | <0.00402 0.00402 | <0.00403 0.00403 | <0.00404 0.00404 | <0.00399 0.00399 |
| o-Xylene                           |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| Total Xylenes                      |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| Total BTEX                         |                   | <0.00200 0.00200 | <0.00201 0.00201 | <0.00201 0.00201 | <0.00202 0.00202 | <0.00202 0.00202 | <0.00200 0.00200 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 10:25  | Feb-11-20 11:05  | Feb-11-20 11:11  | Feb-11-20 11:18  | Feb-11-20 11:25  | Feb-11-20 11:31  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 1010 4.97        | 191 5.02         | 947 5.01         | 481 4.95         | 836 4.97         | 779 5.02         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 17:52  | Feb-11-20 18:11  | Feb-11-20 18:30  | Feb-11-20 18:48  | Feb-11-20 19:07  | Feb-11-20 19:26  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       |
| Diesel Range Organics (DRO)        |                   | 76.4 50.0        | <49.9 49.9       | 192 49.9         | 279 50.0         | 590 49.9         | 652 50.0         |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.0 50.0       | <49.9 49.9       | 106 49.9         | 149 50.0         | 266 49.9         | 270 50.0         |
| Total GRO-DRO                      |                   | 76.4 50.0        | <49.9 49.9       | 192 49.9         | 279 50.0         | 590 49.9         | 652 50.0         |
| Total TPH                          |                   | 76.4 50.0        | <49.9 49.9       | 298 49.9         | 428 50.0         | 856 49.9         | 922 50.0         |

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Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 651875

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

Project Id: 012920009

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Feb-10-20 03:30 pm

Report Date: 13-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651875-007       | 651875-008       | 651875-009       | 651875-010       | 651875-011       | 651875-012       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | FS36             | FS37             | FS38             | FS39             | FS40             | FS41             |
|                                    | <i>Depth:</i>     | 4- ft            | 4- ft            | 4- ft            | 4- ft            | 4- ft            | 4- ft            |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             | SOIL             |
|                                    | <i>Sampled:</i>   | Feb-07-20 10:31  | Feb-07-20 10:34  | Feb-07-20 10:36  | Feb-07-20 10:51  | Feb-07-20 12:53  | Feb-07-20 12:55  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-11-20 11:00  | Feb-12-20 10:15  | Feb-12-20 10:15  | Feb-12-20 10:15  | Feb-12-20 10:15  | Feb-12-20 10:15  |
|                                    | <i>Analyzed:</i>  | Feb-12-20 19:33  | Feb-12-20 22:50  | Feb-12-20 23:11  | Feb-12-20 23:32  | Feb-12-20 23:52  | Feb-13-20 00:13  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Benzene                            |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Toluene                            |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Ethylbenzene                       |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| m,p-Xylenes                        |                   | <0.00402 0.00402 | <0.00398 0.00398 | <0.00398 0.00398 | <0.00399 0.00399 | <0.00400 0.00400 | <0.00402 0.00402 |
| o-Xylene                           |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Total Xylenes                      |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| Total BTEX                         |                   | <0.00201 0.00201 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00201 0.00201 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 11:38  | Feb-11-20 11:58  | Feb-11-20 12:04  | Feb-11-20 12:24  | Feb-11-20 12:31  | Feb-11-20 12:38  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 982 5.05         | 612 4.98         | 753 25.2         | 355 5.01         | 668 4.99         | 639 4.96         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 19:44  | Feb-11-20 16:55  | Feb-11-20 20:04  | Feb-11-20 20:23  | Feb-11-20 21:01  | Feb-11-20 21:20  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       |
| Diesel Range Organics (DRO)        |                   | 128 50.0         | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO) |                   | 66.2 50.0        | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       |
| Total GRO-DRO                      |                   | 128 50.0         | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       |
| Total TPH                          |                   | 194 50.0         | <50.0 50.0       | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       |

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Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 651875

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

Project Id: 012920009

Contact: Dan Moir

Project Location:

Date Received in Lab: Mon Feb-10-20 03:30 pm

Report Date: 13-FEB-20

Project Manager: Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 651875-013       | 651875-014       | 651875-015       | 651875-016       |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|--|--|
|                                    | <i>Field Id:</i>  | FS42             | FS43             | FS44             | FS45             |  |  |
|                                    | <i>Depth:</i>     | 4- ft            | 4- ft            | 4- ft            | 4- ft            |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             | SOIL             |  |  |
|                                    | <i>Sampled:</i>   | Feb-07-20 12:57  | Feb-07-20 13:01  | Feb-07-20 13:05  | Feb-07-20 13:08  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Feb-11-20 11:00  | Feb-11-20 11:00  | Feb-11-20 11:00  | Feb-11-20 11:00  |  |  |
|                                    | <i>Analyzed:</i>  | Feb-12-20 11:20  | Feb-12-20 13:00  | Feb-12-20 13:20  | Feb-12-20 13:40  |  |  |
|                                    | <i>Units/RL:</i>  | 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 | <0.00202 0.00202 |  |  |
| Toluene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00399 0.00399 | <0.00399 0.00399 | <0.00403 0.00403 |  |  |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 |  |  |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  | Feb-11-20 08:20  |  |  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 12:44  | Feb-11-20 12:51  | Feb-11-20 12:58  | Feb-11-20 13:04  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Chloride                           |                   | 519 4.96         | 888 5.02         | 944 5.01         | 441 4.99         |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  | Feb-11-20 14:00  |  |  |
|                                    | <i>Analyzed:</i>  | Feb-11-20 21:39  | Feb-11-20 21:58  | Feb-11-20 22:16  | Feb-11-20 22:35  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <49.9 49.9       | <49.8 49.8       | <49.9 49.9       | <50.0 50.0       |  |  |
| Diesel Range Organics (DRO)        |                   | <49.9 49.9       | <49.8 49.8       | <49.9 49.9       | <50.0 50.0       |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <49.9 49.9       | <49.8 49.8       | <49.9 49.9       | <50.0 50.0       |  |  |
| Total GRO-DRO                      |                   | <49.9 49.9       | <49.8 49.8       | <49.9 49.9       | <50.0 50.0       |  |  |
| Total TPH                          |                   | <49.9 49.9       | <49.8 49.8       | <49.9 49.9       | <50.0 50.0       |  |  |

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Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS30** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-001 Date Collected: 02.07.20 10.13 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1010   | 4.97 | mg/kg | 02.11.20 10.25 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 17.52 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 76.4   | 50.0 | mg/kg | 02.11.20 17.52 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.11.20 17.52 | U    | 1   |
| Total GRO-DRO                      | PHC628     | 76.4   | 50.0 | mg/kg | 02.11.20 17.52 |      | 1   |
| Total TPH                          | PHC635     | 76.4   | 50.0 | mg/kg | 02.11.20 17.52 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 73         | %     | 70-135 | 02.11.20 17.52 |      |
| o-Terphenyl    | 84-15-1    | 75         | %     | 70-135 | 02.11.20 17.52 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS30**  
 Lab Sample Id: 651875-001

Matrix: Soil  
 Date Collected: 02.07.20 10.13

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.12.20 10.15

Basis: Wet Weight

Seq Number: 3116350

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.13.20 10.04       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 02.13.20 10.04       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 02.13.20 10.04       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS31** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-002 Date Collected: 02.07.20 10.16 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 191    | 5.02 | mg/kg | 02.11.20 11.05 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 18.11 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.11.20 18.11 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.11.20 18.11 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.11.20 18.11 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.11.20 18.11 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 79         | %     | 70-135 | 02.11.20 18.11 |      |
| o-Terphenyl    | 84-15-1    | 81         | %     | 70-135 | 02.11.20 18.11 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS31**  
 Lab Sample Id: 651875-002

Matrix: Soil  
 Date Collected: 02.07.20 10.16

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 17.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.12.20 17.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 88                | %            | 70-130        | 02.12.20 17.52       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.12.20 17.52       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: FS32 Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-003 Date Collected: 02.07.20 10.19 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 947    | 5.01 | mg/kg | 02.11.20 11.11 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 18.30 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 192    | 49.9 | mg/kg | 02.11.20 18.30 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 106    | 49.9 | mg/kg | 02.11.20 18.30 |      | 1   |
| Total GRO-DRO                      | PHC628     | 192    | 49.9 | mg/kg | 02.11.20 18.30 |      | 1   |
| Total TPH                          | PHC635     | 298    | 49.9 | mg/kg | 02.11.20 18.30 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 74         | %     | 70-135 | 02.11.20 18.30 |      |
| o-Terphenyl    | 84-15-1    | 76         | %     | 70-135 | 02.11.20 18.30 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: FS32  
 Lab Sample Id: 651875-003

Matrix: Soil  
 Date Collected: 02.07.20 10.19

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.11.20 11.00

Basis: Wet Weight

Seq Number: 3116295

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.12.20 18.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 88                | %            | 70-130        | 02.12.20 18.12       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 115               | %            | 70-130        | 02.12.20 18.12       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS33** Matrix: **Soil** Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-004 Date Collected: 02.07.20 10.22 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: **CHE** % Moisture:  
 Analyst: **CHE** Date Prep: 02.11.20 08.20 Basis: **Wet Weight**  
 Seq Number: 3116222

| Parameter       | Cas Number | Result     | RL   | Units | Analysis Date  | Flag | Dil |
|-----------------|------------|------------|------|-------|----------------|------|-----|
| <b>Chloride</b> | 16887-00-6 | <b>481</b> | 4.95 | mg/kg | 02.11.20 11.18 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: **DVM** % Moisture:  
 Analyst: **ARM** Date Prep: 02.11.20 14.00 Basis: **Wet Weight**  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result     | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0      | 50.0 | mg/kg | 02.11.20 18.48 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>279</b> | 50.0 | mg/kg | 02.11.20 18.48 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <b>149</b> | 50.0 | mg/kg | 02.11.20 18.48 |      | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>279</b> | 50.0 | mg/kg | 02.11.20 18.48 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>428</b> | 50.0 | mg/kg | 02.11.20 18.48 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 74         | %     | 70-135 | 02.11.20 18.48 |      |
| o-Terphenyl    | 84-15-1    | 76         | %     | 70-135 | 02.11.20 18.48 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS33**  
 Lab Sample Id: 651875-004

Matrix: Soil  
 Date Collected: 02.07.20 10.22

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 18.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 90                | %            | 70-130        | 02.12.20 18.32       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.12.20 18.32       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS34**  
 Lab Sample Id: 651875-005

Matrix: Soil  
 Date Collected: 02.07.20 10.25

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3116222

Date Prep: 02.11.20 08.20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 836    | 4.97 | mg/kg | 02.11.20 11.25 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3116220

Date Prep: 02.11.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 19.07 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 590    | 49.9 | mg/kg | 02.11.20 19.07 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 266    | 49.9 | mg/kg | 02.11.20 19.07 |      | 1   |
| Total GRO-DRO                      | PHC628     | 590    | 49.9 | mg/kg | 02.11.20 19.07 |      | 1   |
| Total TPH                          | PHC635     | 856    | 49.9 | mg/kg | 02.11.20 19.07 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 75         | %     | 70-135 | 02.11.20 19.07 |      |
| o-Terphenyl    | 84-15-1    | 77         | %     | 70-135 | 02.11.20 19.07 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS34**  
 Lab Sample Id: 651875-005

Matrix: Soil  
 Date Collected: 02.07.20 10.25

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.11.20 11.00

Basis: Wet Weight

Seq Number: 3116295

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00404          | 0.00404      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.12.20 18.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.12.20 18.52       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 83                | %            | 70-130        | 02.12.20 18.52       |             |     |



# Certificate of Analytical Results 651875



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: FS35 Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-006 Date Collected: 02.07.20 10.28 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 779    | 5.02 | mg/kg | 02.11.20 11.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 19.26 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 652    | 50.0 | mg/kg | 02.11.20 19.26 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 270    | 50.0 | mg/kg | 02.11.20 19.26 |      | 1   |
| Total GRO-DRO                      | PHC628     | 652    | 50.0 | mg/kg | 02.11.20 19.26 |      | 1   |
| Total TPH                          | PHC635     | 922    | 50.0 | mg/kg | 02.11.20 19.26 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 76         | %     | 70-135 | 02.11.20 19.26 |      |
| o-Terphenyl    | 84-15-1    | 79         | %     | 70-135 | 02.11.20 19.26 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: FS35  
 Lab Sample Id: 651875-006

Matrix: Soil  
 Date Collected: 02.07.20 10.28

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.11.20 11.00

Basis: Wet Weight

Seq Number: 3116295

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.12.20 19.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 120               | %            | 70-130        | 02.12.20 19.12       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 78                | %            | 70-130        | 02.12.20 19.12       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS36** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-007 Date Collected: 02.07.20 10.31 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 982    | 5.05 | mg/kg | 02.11.20 11.38 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 19.44 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 128    | 50.0 | mg/kg | 02.11.20 19.44 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 66.2   | 50.0 | mg/kg | 02.11.20 19.44 |      | 1   |
| Total GRO-DRO                      | PHC628     | 128    | 50.0 | mg/kg | 02.11.20 19.44 |      | 1   |
| Total TPH                          | PHC635     | 194    | 50.0 | mg/kg | 02.11.20 19.44 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 75         | %     | 70-135 | 02.11.20 19.44 |      |
| o-Terphenyl    | 84-15-1    | 76         | %     | 70-135 | 02.11.20 19.44 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS36**  
 Lab Sample Id: 651875-007

Matrix: Soil  
 Date Collected: 02.07.20 10.31

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.11.20 11.00

Basis: Wet Weight

Seq Number: 3116295

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.12.20 19.33       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 73                | %            | 70-130        | 02.12.20 19.33       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.12.20 19.33       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS37** Matrix: **Soil** Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-008 Date Collected: 02.07.20 10.34 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: **CHE** % Moisture:  
 Analyst: **CHE** Date Prep: 02.11.20 08.20 Basis: **Wet Weight**  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 612    | 4.98 | mg/kg | 02.11.20 11.58 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: **DVM** % Moisture:  
 Analyst: **ARM** Date Prep: 02.11.20 14.00 Basis: **Wet Weight**  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 16.55 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.11.20 16.55 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.11.20 16.55 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.11.20 16.55 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.11.20 16.55 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 75         | %     | 70-135 | 02.11.20 16.55 |      |
| o-Terphenyl    | 84-15-1    | 76         | %     | 70-135 | 02.11.20 16.55 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS37**  
 Lab Sample Id: 651875-008

Matrix: Soil  
 Date Collected: 02.07.20 10.34

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116350

Date Prep: 02.12.20 10.15

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         | 02.12.20 22.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.12.20 22.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 02.12.20 22.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 115               | %            | 70-130        | 02.12.20 22.50       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS38** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-009 Date Collected: 02.07.20 10.36 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 753    | 25.2 | mg/kg | 02.11.20 12.04 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 20.04 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.11.20 20.04 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.11.20 20.04 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.11.20 20.04 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.11.20 20.04 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 73         | %     | 70-135 | 02.11.20 20.04 |      |
| o-Terphenyl    | 84-15-1    | 74         | %     | 70-135 | 02.11.20 20.04 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS38**  
 Lab Sample Id: 651875-009

Matrix: Soil  
 Date Collected: 02.07.20 10.36

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.12.20 10.15

Basis: Wet Weight

Seq Number: 3116350

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.12.20 23.11       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 02.12.20 23.11       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 02.12.20 23.11       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS39**  
 Lab Sample Id: 651875-010

Matrix: Soil  
 Date Collected: 02.07.20 10.51

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3116222

Date Prep: 02.11.20 08.20

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 355    | 5.01 | mg/kg | 02.11.20 12.24 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3116220

Date Prep: 02.11.20 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 20.23 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.11.20 20.23 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.11.20 20.23 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.11.20 20.23 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.11.20 20.23 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 73         | %     | 70-135 | 02.11.20 20.23 |      |
| o-Terphenyl    | 84-15-1    | 74         | %     | 70-135 | 02.11.20 20.23 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS39**  
 Lab Sample Id: 651875-010

Matrix: Soil  
 Date Collected: 02.07.20 10.51

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.12.20 10.15

Basis: Wet Weight

Seq Number: 3116350

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 02.12.20 23.32       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 02.12.20 23.32       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS40** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-011 Date Collected: 02.07.20 12.53 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 668    | 4.99 | mg/kg | 02.11.20 12.31 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 21.01 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.11.20 21.01 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.11.20 21.01 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.11.20 21.01 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.11.20 21.01 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 76         | %     | 70-135 | 02.11.20 21.01 |      |
| o-Terphenyl    | 84-15-1    | 77         | %     | 70-135 | 02.11.20 21.01 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS40**  
 Lab Sample Id: 651875-011

Matrix: Soil  
 Date Collected: 02.07.20 12.53

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116350

Date Prep: 02.12.20 10.15

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         | 02.12.20 23.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.12.20 23.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 109               | %            | 70-130        | 02.12.20 23.52       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 02.12.20 23.52       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS41** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-012 Date Collected: 02.07.20 12.55 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 639    | 4.96 | mg/kg | 02.11.20 12.38 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 21.20 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.11.20 21.20 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.11.20 21.20 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.11.20 21.20 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.11.20 21.20 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 74         | %     | 70-135 | 02.11.20 21.20 |      |
| o-Terphenyl    | 84-15-1    | 74         | %     | 70-135 | 02.11.20 21.20 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS41**  
 Lab Sample Id: 651875-012

Matrix: Soil  
 Date Collected: 02.07.20 12.55

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 02.12.20 10.15

Basis: Wet Weight

Seq Number: 3116350

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 02.13.20 00.13       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 95                | %            | 70-130        | 02.13.20 00.13       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 110               | %            | 70-130        | 02.13.20 00.13       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS42** Matrix: **Soil** Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-013 Date Collected: 02.07.20 12.57 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: **CHE** % Moisture:  
 Analyst: **CHE** Date Prep: 02.11.20 08.20 Basis: **Wet Weight**  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 519    | 4.96 | mg/kg | 02.11.20 12.44 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: **DVM** % Moisture:  
 Analyst: **ARM** Date Prep: 02.11.20 14.00 Basis: **Wet Weight**  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 21.39 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.11.20 21.39 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.11.20 21.39 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.11.20 21.39 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.11.20 21.39 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 74         | %     | 70-135 | 02.11.20 21.39 |      |
| o-Terphenyl    | 84-15-1    | 75         | %     | 70-135 | 02.11.20 21.39 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS42**  
 Lab Sample Id: 651875-013

Matrix: Soil  
 Date Collected: 02.07.20 12.57

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 11.20       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 02.12.20 11.20       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 71                | %            | 70-130        | 02.12.20 11.20       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.12.20 11.20       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS43** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-014 Date Collected: 02.07.20 13.01 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 888    | 5.02 | mg/kg | 02.11.20 12.51 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 02.11.20 21.58 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 02.11.20 21.58 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 02.11.20 21.58 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 02.11.20 21.58 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 02.11.20 21.58 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 74         | %     | 70-135 | 02.11.20 21.58 |      |
| o-Terphenyl    | 84-15-1    | 75         | %     | 70-135 | 02.11.20 21.58 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS43**  
 Lab Sample Id: 651875-014

Matrix: Soil  
 Date Collected: 02.07.20 13.01

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 13.00       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.00       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 114               | %            | 70-130        | 02.12.20 13.00       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 81                | %            | 70-130        | 02.12.20 13.00       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS44** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-015 Date Collected: 02.07.20 13.05 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 944    | 5.01 | mg/kg | 02.11.20 12.58 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 02.11.20 22.16 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 02.11.20 22.16 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 02.11.20 22.16 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 02.11.20 22.16 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 02.11.20 22.16 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 73         | %     | 70-135 | 02.11.20 22.16 |      |
| o-Terphenyl    | 84-15-1    | 74         | %     | 70-135 | 02.11.20 22.16 |      |



# Certificate of Analytical Results 651875



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS44**  
Lab Sample Id: 651875-015

Matrix: Soil  
Date Collected: 02.07.20 13.05

Date Received: 02.10.20 15.30  
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 13.20       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 02.12.20 13.20       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 80                | %            | 70-130        | 02.12.20 13.20       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 112               | %            | 70-130        | 02.12.20 13.20       |             |     |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS45** Matrix: Soil Date Received: 02.10.20 15.30  
 Lab Sample Id: 651875-016 Date Collected: 02.07.20 13.08 Sample Depth: 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: CHE % Moisture:  
 Analyst: CHE Date Prep: 02.11.20 08.20 Basis: Wet Weight  
 Seq Number: 3116222

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 441    | 4.99 | mg/kg | 02.11.20 13.04 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 02.11.20 14.00 Basis: Wet Weight  
 Seq Number: 3116220

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 02.11.20 22.35 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 02.11.20 22.35 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 02.11.20 22.35 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 02.11.20 22.35 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 02.11.20 22.35 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 73         | %     | 70-135 | 02.11.20 22.35 |      |
| o-Terphenyl    | 84-15-1    | 74         | %     | 70-135 | 02.11.20 22.35 |      |



# Certificate of Analytical Results 651875

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **FS45**  
 Lab Sample Id: 651875-016

Matrix: Soil  
 Date Collected: 02.07.20 13.08

Date Received: 02.10.20 15.30  
 Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3116295

Date Prep: 02.11.20 11.00

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         | 02.12.20 13.40       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 02.12.20 13.40       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 113               | %            | 70-130        | 02.12.20 13.40       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 82                | %            | 70-130        | 02.12.20 13.40       |             |     |



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

+ NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
**EMSU WSW 278**

**Analytical Method: Chloride by EPA 300**

Seq Number: 3116222

MB Sample Id: 7696368-1-BLK

Matrix: Solid

LCS Sample Id: 7696368-1-BKS

Prep Method: E300P

Date Prep: 02.11.20

LCSD Sample Id: 7696368-1-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          | 249        | 100      | 250         | 100       | 90-110 | 0    | 20        | mg/kg | 02.11.20 09:32 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3116222

Parent Sample Id: 650826-015

Matrix: Soil

MS Sample Id: 650826-015 S

Prep Method: E300P

Date Prep: 02.11.20

MSD Sample Id: 650826-015 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 738           | 198          | 946       | 105     | 947        | 106      | 90-110 | 0    | 20        | mg/kg | 02.11.20 09:52 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3116222

Parent Sample Id: 651875-007

Matrix: Soil

MS Sample Id: 651875-007 S

Prep Method: E300P

Date Prep: 02.11.20

MSD Sample Id: 651875-007 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 982           | 202          | 1180      | 98      | 1190       | 103      | 90-110 | 1    | 20        | mg/kg | 02.11.20 11:45 |      |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3116220

MB Sample Id: 7696420-1-BLK

Matrix: Solid

LCS Sample Id: 7696420-1-BKS

Prep Method: SW8015P

Date Prep: 02.11.20

LCSD Sample Id: 7696420-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 1010       | 101      | 984         | 98        | 70-135 | 3    | 20        | mg/kg | 02.11.20 16:17 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 1030       | 103      | 998         | 100       | 70-135 | 3    | 20        | mg/kg | 02.11.20 16:17 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 75      |         | 104      |          | 100       |           | 70-135 | %     | 02.11.20 16:17 |
| o-Terphenyl    | 76      |         | 97       |          | 90        |           | 70-135 | %     | 02.11.20 16:17 |

**Analytical Method: TPH by SW8015 Mod**

Seq Number: 3116220

Matrix: Solid

MB Sample Id: 7696420-1-BLK

Prep Method: SW8015P

Date Prep: 02.11.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 02.11.20 15:58 |      |

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.

EMSU WSW 278

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3116220

Parent Sample Id: 651875-008

Matrix: Soil

MS Sample Id: 651875-008 S

Prep Method: SW8015P

Date Prep: 02.11.20

MSD Sample Id: 651875-008 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) | <14.9         | 996          | 938       | 94      | 978        | 98       | 70-135 | 4    | 20        | mg/kg | 02.11.20 17:14 |      |
| Diesel Range Organics (DRO)       | <14.9         | 996          | 950       | 95      | 980        | 98       | 70-135 | 3    | 20        | mg/kg | 02.11.20 17:14 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 100     |         | 102      |          | 70-135 | %     | 02.11.20 17:14 |
| o-Terphenyl    | 85      |         | 92       |          | 70-135 | %     | 02.11.20 17:14 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3116295

MB Sample Id: 7696407-1-BLK

Matrix: Solid

LCS Sample Id: 7696407-1-BKS

Prep Method: SW5030B

Date Prep: 02.11.20

LCSD Sample Id: 7696407-1-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        | 0.113      | 113      | 0.108       | 108       | 70-130 | 5    | 35        | mg/kg | 02.12.20 09:00 |      |
| Toluene      | <0.000456 | 0.100        | 0.111      | 111      | 0.107       | 107       | 70-130 | 4    | 35        | mg/kg | 02.12.20 09:00 |      |
| Ethylbenzene | <0.000565 | 0.100        | 0.109      | 109      | 0.105       | 105       | 70-130 | 4    | 35        | mg/kg | 02.12.20 09:00 |      |
| m,p-Xylenes  | <0.00101  | 0.200        | 0.213      | 107      | 0.208       | 104       | 70-130 | 2    | 35        | mg/kg | 02.12.20 09:00 |      |
| o-Xylene     | <0.000344 | 0.100        | 0.106      | 106      | 0.102       | 102       | 70-130 | 4    | 35        | mg/kg | 02.12.20 09:00 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 111      |          | 111       |           | 70-130 | %     | 02.12.20 09:00 |
| 4-Bromofluorobenzene | 69      | **      | 88       |          | 88        |           | 70-130 | %     | 02.12.20 09:00 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3116350

MB Sample Id: 7696472-1-BLK

Matrix: Solid

LCS Sample Id: 7696472-1-BKS

Prep Method: SW5030B

Date Prep: 02.12.20

LCSD Sample Id: 7696472-1-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        | 0.110      | 110      | 0.111       | 111       | 70-130 | 1    | 35        | mg/kg | 02.12.20 15:15 |      |
| Toluene      | <0.00200  | 0.100        | 0.101      | 101      | 0.102       | 102       | 70-130 | 1    | 35        | mg/kg | 02.12.20 15:15 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0961     | 96       | 0.0987      | 99        | 70-130 | 3    | 35        | mg/kg | 02.12.20 15:15 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.189      | 95       | 0.197       | 99        | 70-130 | 4    | 35        | mg/kg | 02.12.20 15:15 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0929     | 93       | 0.0964      | 96        | 70-130 | 4    | 35        | mg/kg | 02.12.20 15:15 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 94      |         | 93       |          | 93        |           | 70-130 | %     | 02.12.20 15:15 |
| 4-Bromofluorobenzene | 105     |         | 93       |          | 97        |           | 70-130 | %     | 02.12.20 15:15 |

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



## LT Environmental, Inc.

EMSU WSW 278

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3116295

Parent Sample Id: 651875-013

Matrix: Soil

MS Sample Id: 651875-013 S

Prep Method: SW5030B

Date Prep: 02.11.20

MSD Sample Id: 651875-013 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | 0.000408      | 0.100        | 0.108     | 108     | 0.0793     | 80       | 70-130 | 31   | 35        | mg/kg | 02.12.20 09:41 |      |
| Toluene      | 0.000537      | 0.100        | 0.103     | 102     | 0.0946     | 95       | 70-130 | 9    | 35        | mg/kg | 02.12.20 09:41 |      |
| Ethylbenzene | <0.000565     | 0.100        | 0.0955    | 96      | 0.0895     | 90       | 70-130 | 6    | 35        | mg/kg | 02.12.20 09:41 |      |
| m,p-Xylenes  | <0.00101      | 0.200        | 0.189     | 95      | 0.173      | 87       | 70-130 | 9    | 35        | mg/kg | 02.12.20 09:41 |      |
| o-Xylene     | <0.000344     | 0.100        | 0.0928    | 93      | 0.0868     | 88       | 70-130 | 7    | 35        | mg/kg | 02.12.20 09:41 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 109     |         | 120      |          | 70-130 | %     | 02.12.20 09:41 |
| 4-Bromofluorobenzene | 84      |         | 68       | **       | 70-130 | %     | 02.12.20 09:41 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3116350

Parent Sample Id: 652071-001

Matrix: Soil

MS Sample Id: 652071-001 S

Prep Method: SW5030B

Date Prep: 02.12.20

MSD Sample Id: 652071-001 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       | 0.107     | 107     | 0.103      | 103      | 70-130 | 4    | 35        | mg/kg | 02.12.20 16:10 |      |
| Toluene      | <0.00200      | 0.0998       | 0.0989    | 99      | 0.0946     | 95       | 70-130 | 4    | 35        | mg/kg | 02.12.20 16:10 |      |
| Ethylbenzene | <0.00200      | 0.0998       | 0.0964    | 97      | 0.0909     | 91       | 70-130 | 6    | 35        | mg/kg | 02.12.20 16:10 |      |
| m,p-Xylenes  | <0.00399      | 0.200        | 0.193     | 97      | 0.181      | 91       | 70-130 | 6    | 35        | mg/kg | 02.12.20 16:10 |      |
| o-Xylene     | <0.00200      | 0.0998       | 0.0942    | 94      | 0.0883     | 88       | 70-130 | 6    | 35        | mg/kg | 02.12.20 16:10 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 94      |         | 94       |          | 70-130 | %     | 02.12.20 16:10 |
| 4-Bromofluorobenzene | 100     |         | 97       |          | 70-130 | %     | 02.12.20 16:10 |

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

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

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

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



## Chain of Custody

Work Order No:

1051875

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

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|                  |                                        |                         |                                   |
|------------------|----------------------------------------|-------------------------|-----------------------------------|
| 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 East Green Street            |
| City, State ZIP: | Midland, TX 79705                      | City, State ZIP:        | Carlsbad, NM 88220                |
| Phone:           | (432) 236-3849                         | Email:                  | khenry@ltenv.com, dmoir@ltenv.com |

|                                                                                                                                                                                                                         |                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: <input type="checkbox"/> UST/ST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/><br>State of Project: |                                                                                                                                                            |
| Reporting Level II                                                                                                                                                                                                      | <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> |
| Deliverables: EDD                                                                                                                                                                                                       | <input checked="" type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                  |

|                       |                                                                     |                                  |                                                                     |                  |                                                                     |
|-----------------------|---------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------|------------------|---------------------------------------------------------------------|
| Project Name:         | EMSU WSN 878                                                        | Turn Around                      |                                                                     | ANALYSIS REQUEST | Work Order Notes                                                    |
| Project Number:       | 012920009                                                           | Routine <input type="checkbox"/> |                                                                     |                  |                                                                     |
| P.O. Number:          |                                                                     | Rush: 30 day                     |                                                                     |                  |                                                                     |
| Sampler's Name:       | Kaleb Henry                                                         | Due Date:                        |                                                                     |                  |                                                                     |
| <b>SAMPLE RECEIPT</b> |                                                                     | Temp Blank:                      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Wet Ice:         | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Temperature (°C):     | 310                                                                 | Thermometer:                     | 28                                                                  |                  |                                                                     |
| Received Intact:      | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Correction Factor:               | 0                                                                   |                  |                                                                     |
| Cooler Custody Seals: | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Total Containers:                |                                                                     |                  |                                                                     |
| Sample Custody Seals: | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |                                  |                                                                     |                  |                                                                     |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number of Containers |                   |                      |   |  |  |  |  |  |  | Sample Comments |
|-----------------------|--------|--------------|--------------|-------|----------------------|-------------------|----------------------|---|--|--|--|--|--|--|-----------------|
|                       |        |              |              |       | TPH (EPA 8015)       | BTEX (EPA 0-8021) | Chloride (EPA 300.0) |   |  |  |  |  |  |  |                 |
| ES30                  | S      | 2/7/20       | 1013         | 4'    | 1                    | X                 | X                    | X |  |  |  |  |  |  |                 |
| ES31                  |        |              | 1016         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES32                  |        |              | 1019         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES33                  |        |              | 1022         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES34                  |        |              | 1025         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES35                  |        |              | 1028         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES36                  |        |              | 1031         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES37                  |        |              | 1034         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES38                  |        |              | 1036         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |
| ES39                  |        |              | 1251         |       |                      |                   |                      |   |  |  |  |  |  |  |                 |

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. [Signature]               | 2. [Signature]           | 2/10/20   | 3. [Signature]               | 4. [Signature]           |           |
| 5. [Signature]               | 6. [Signature]           |           |                              |                          |           |



## Chain of Custody

**Work Order No:**

1051075

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 (813-486-3927)  
Hobbs, NM (575-392-7550)

www.xenco.com 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 East Green Street            |
| City, State ZIP: | Midland, TX 79705                      | City, State ZIP:        | Carlsbad, NM 88220                |
| Phone:           | (432) 236-3849                         | Email:                  | khenry@ltenv.com, dmoir@ltenv.com |

|                                                                                                                                                                                   |                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Work Order Comments</b>                                                                                                                                                        |                                                                                             |
| <b>Program:</b> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/> | <b>State of Project:</b>                                                                    |
| Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> ST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>     | Deliverables: EDD <input checked="" type="checkbox"/> ADAPT <input type="checkbox"/> Other: |

|                 |               |  |  |  |  |  |  |  |  |  |                                  |
|-----------------|---------------|--|--|--|--|--|--|--|--|--|----------------------------------|
| Project Name:   | E/MSU MSW 278 |  |  |  |  |  |  |  |  |  | Turn Around                      |
| Project Number: | 012920009     |  |  |  |  |  |  |  |  |  | Routine <input type="checkbox"/> |
| P.O. Number:    |               |  |  |  |  |  |  |  |  |  | Rush:                            |
| Sampler's Name: | Kaleb Henry   |  |  |  |  |  |  |  |  |  | Due Date:                        |

|                       |     |             |     |                    |          |     |    |                 |  |  |
|-----------------------|-----|-------------|-----|--------------------|----------|-----|----|-----------------|--|--|
| <b>SAMPLE RECEIPT</b> |     |             |     |                    |          |     |    |                 |  |  |
| Temperature (°C):     | 24  | Temp Blank: | Yes | No                 | Wet Ice: | Yes | No | Thermometer: 1A |  |  |
| Received intact:      | Yes | No          | BC  |                    |          |     |    |                 |  |  |
| Cooler Custody Seals: | Yes | No          | N/A | Correction Factor: |          | 0   |    |                 |  |  |
| Sample Custody Seals: | Yes | No          | N/A | Total Containers:  |          |     |    |                 |  |  |

|                                                               |  |  |  |  |  |  |  |  |  |  |
|---------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|
| <b>Analysis Request</b>                                       |  |  |  |  |  |  |  |  |  |  |
| Number of Containers                                          |  |  |  |  |  |  |  |  |  |  |
| EPA 8015)                                                     |  |  |  |  |  |  |  |  |  |  |
| EPA 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<br>TCLP / SPLP 6010: | Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO <sub>2</sub> Na Sr Ti Sn U V Zn<br>Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U |
|                                              |                            | 1631 / 245.1 / 7470 / 7471 : Hg                                                                                                                 |

Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, 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 |
|------------------------------|-----------------------------------------------------------------------------------|-----------|------------------------------|--------------------------|-----------|
|                              |  | 2         |                              |                          |           |
| 1                            |                                                                                   |           |                              |                          |           |
| 3                            |                                                                                   | 4         |                              |                          |           |
| 5                            |                                                                                   | 6         |                              |                          |           |

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 02.10.2020 03.30.00 PM

Work Order #: 651875

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

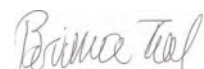
| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 3.6      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received 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#:

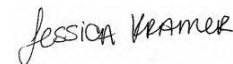
Checklist completed by:



Brianna Teel

Date: 02.10.2020

Checklist reviewed by:



Jessica Kramer

Date: 02.11.2020

# Analytical Report 654843

for  
**LT Environmental, Inc.**

**Project Manager: Dan Moir**

**EMSU WSW 278**

**012920009**

**09-MAR-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



09-MAR-20

Project Manager: **Dan Moir**

**LT Environmental, Inc.**

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **654843**

**EMSU WSW 278**

Project Address: Lea

**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) 654843. 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. 654843 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project 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 654843****LT Environmental, Inc., Arvada, CO**

EMSU WSW 278

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW 01     | S      | 03-05-20 13:45 | 0 - 4 ft     | 654843-001    |
| SW 02     | S      | 03-05-20 14:10 | 0 - 4 ft     | 654843-002    |
| SW 03     | S      | 03-05-20 14:19 | 0 - 4 ft     | 654843-003    |
| SW 04     | S      | 03-05-20 14:25 | 0 - 4 ft     | 654843-004    |
| SW 05     | S      | 03-05-20 14:29 | 0 - 4 ft     | 654843-005    |
| SW 06     | S      | 03-05-20 14:45 | 0 - 4 ft     | 654843-006    |
| SW 07     | S      | 03-05-20 14:51 | 0 - 4 ft     | 654843-007    |
| SW 08     | S      | 03-05-20 14:57 | 0 - 4 ft     | 654843-008    |
| SW 09     | S      | 03-05-20 15:02 | 0 - 4 ft     | 654843-009    |
| SW 10     | S      | 03-05-20 15:10 | 0 - 4 ft     | 654843-010    |
| SW 11     | S      | 03-05-20 15:16 | 0 - 4 ft     | 654843-011    |
| SW 12     | S      | 03-05-20 15:21 | 0 - 4 ft     | 654843-012    |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW 278**

Project ID: 012920009  
Work Order Number(s): 654843

Report Date: 09-MAR-20  
Date Received: 03/06/2020

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**Sample receipt non conformances and comments:**

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

None

**Analytical non conformances and comments:**

Batch: LBA-3118837 BTEX by EPA 8021B

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

Batch: LBA-3118843 Chloride by EPA 300

Lab Sample ID 654843-011 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: 654843-001, -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-3118957 BTEX by EPA 8021B

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



# Certificate of Analysis Summary 654843

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

**Project Id:** 012920009  
**Contact:** Dan Moir  
**Project Location:** Lea

**Date Received in Lab:** Fri Mar-06-20 02:27 pm  
**Report Date:** 09-MAR-20  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 654843-001       | 654843-002       | 654843-003       | 654843-004       | 654843-005       | 654843-006       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SW 01            | SW 02            | SW 03            | SW 04            | SW 05            | SW 06            |
|                                    | <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>   | Mar-05-20 13:45  | Mar-05-20 14:10  | Mar-05-20 14:19  | Mar-05-20 14:25  | Mar-05-20 14:29  | Mar-05-20 14:45  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Mar-06-20 14:30  | Mar-06-20 14:30  | Mar-06-20 14:30  | Mar-06-20 14:30  | Mar-06-20 14:30  | Mar-07-20 09:00  |
|                                    | <i>Analyzed:</i>  | Mar-07-20 03:32  | Mar-07-20 03:56  | Mar-07-20 04:17  | Mar-07-20 04:38  | Mar-07-20 04:59  | Mar-07-20 11:49  |
|                                    | <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 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00399 0.00399 | <0.00399 0.00399 | <0.00398 0.00398 | <0.00398 0.00398 | <0.00402 0.00402 |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00199 0.00199 | <0.00199 0.00199 | <0.00201 0.00201 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  |
|                                    | <i>Analyzed:</i>  | Mar-06-20 22:11  | Mar-06-20 22:27  | Mar-06-20 22:32  | Mar-06-20 22:37  | Mar-06-20 22:43  | Mar-06-20 22:58  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 280 X 4.98       | 1390 25.2        | 252 5.00         | 796 5.02         | 157 4.99         | 440 24.9         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  |
|                                    | <i>Analyzed:</i>  | Mar-07-20 01:42  | Mar-07-20 02:03  | Mar-07-20 02:25  | Mar-07-20 02:46  | Mar-07-20 03:27  | Mar-07-20 03:48  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.0 50.0       | <49.8 49.8       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Diesel Range Organics (DRO)        |                   | <50.0 50.0       | <49.8 49.8       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.0 50.0       | <49.8 49.8       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Total GRO-DRO                      |                   | <50.0 50.0       | <49.8 49.8       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |
| Total TPH                          |                   | <50.0 50.0       | <49.8 49.8       | <49.9 49.9       | <49.8 49.8       | <50.0 50.0       | <49.9 49.9       |

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

Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 654843

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

**Project Id:** 012920009  
**Contact:** Dan Moir  
**Project Location:** Lea

**Date Received in Lab:** Fri Mar-06-20 02:27 pm  
**Report Date:** 09-MAR-20  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 654843-007       | 654843-008       | 654843-009       | 654843-010       | 654843-011       | 654843-012       |
|------------------------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                    | <i>Field Id:</i>  | SW 07            | SW 08            | SW 09            | SW 10            | SW 11            | SW 12            |
|                                    | <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>   | Mar-05-20 14:51  | Mar-05-20 14:57  | Mar-05-20 15:02  | Mar-05-20 15:10  | Mar-05-20 15:16  | Mar-05-20 15:21  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | Mar-07-20 09:00  | Mar-07-20 09:00  | Mar-07-20 09:00  | Mar-07-20 09:00  | Mar-07-20 09:00  | Mar-07-20 09:00  |
|                                    | <i>Analyzed:</i>  | Mar-07-20 16:35  | Mar-07-20 18:50  | Mar-07-20 19:11  | Mar-07-20 19:32  | Mar-07-20 19:52  | Mar-07-20 20:13  |
|                                    | <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 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| Toluene                            |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| Ethylbenzene                       |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| m,p-Xylenes                        |                   | <0.00398 0.00398 | <0.00399 0.00399 | <0.00401 0.00401 | <0.00403 0.00403 | <0.00397 0.00397 | <0.00398 0.00398 |
| o-Xylene                           |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| Total Xylenes                      |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| Total BTEX                         |                   | <0.00199 0.00199 | <0.00200 0.00200 | <0.00200 0.00200 | <0.00202 0.00202 | <0.00198 0.00198 | <0.00199 0.00199 |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  | Mar-06-20 17:35  |
|                                    | <i>Analyzed:</i>  | Mar-06-20 23:04  | Mar-06-20 23:09  | Mar-06-20 23:14  | Mar-06-20 23:19  | Mar-06-20 23:25  | Mar-06-20 23:41  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Chloride                           |                   | 201 4.98         | 536 5.01         | 430 4.99         | 707 4.99         | 36.7 5.04        | 912 4.99         |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  | Mar-06-20 16:00  |
|                                    | <i>Analyzed:</i>  | Mar-07-20 04:09  | Mar-07-20 09:22  | Mar-07-20 04:52  | Mar-07-20 05:13  | Mar-07-20 05:34  | Mar-07-20 05:55  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         | mg/kg RL         |
| Gasoline Range Hydrocarbons (GRO)  |                   | <50.0 50.0       | <49.8 49.8       | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Diesel Range Organics (DRO)        |                   | <50.0 50.0       | 154 49.8         | 63.4 50.0        | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Motor Oil Range Hydrocarbons (MRO) |                   | <50.0 50.0       | 62.3 49.8        | <50.0 50.0       | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Total GRO-DRO                      |                   | <50.0 50.0       | 154 49.8         | 63.4 50.0        | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |
| Total TPH                          |                   | <50.0 50.0       | 216 49.8         | 63.4 50.0        | <50.0 50.0       | <49.9 49.9       | <49.9 49.9       |

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.

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Version: 1.9%

Jessica Kramer  
Project Assistant



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 01**  
 Lab Sample Id: 654843-001

Matrix: Soil  
 Date Collected: 03.05.20 13.45

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 280    | 4.98 | mg/kg | 03.06.20 22.11 | X    | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.07.20 01.42 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.07.20 01.42 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.07.20 01.42 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.07.20 01.42 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.07.20 01.42 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 03.07.20 01.42 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 03.07.20 01.42 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 01**  
 Lab Sample Id: 654843-001

Matrix: Soil  
 Date Collected: 03.05.20 13.45

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118837

Date Prep: 03.06.20 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         | 03.07.20 03.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.07.20 03.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 73                | %            | 70-130        | 03.07.20 03.32       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 104               | %            | 70-130        | 03.07.20 03.32       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 02** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-002 Date Collected: 03.05.20 14.10 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1390   | 25.2 | mg/kg | 03.06.20 22.27 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 03.07.20 02.03 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 03.07.20 02.03 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 03.07.20 02.03 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 03.07.20 02.03 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 03.07.20 02.03 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 03.07.20 02.03 |      |
| o-Terphenyl    | 84-15-1    | 101        | %     | 70-135 | 03.07.20 02.03 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 02**  
 Lab Sample Id: 654843-002

Matrix: Soil  
 Date Collected: 03.05.20 14.10

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.06.20 14.30

Basis: Wet Weight

Seq Number: 3118837

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 03.07.20 03.56       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 03.07.20 03.56       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 96                | %            | 70-130        | 03.07.20 03.56       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 03** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-003 Date Collected: 03.05.20 14.19 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 252    | 5.00 | mg/kg | 03.06.20 22.32 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 03.07.20 02.25 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 03.07.20 02.25 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 03.07.20 02.25 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 03.07.20 02.25 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 03.07.20 02.25 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 03.07.20 02.25 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 03.07.20 02.25 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 03**  
 Lab Sample Id: 654843-003

Matrix: Soil  
 Date Collected: 03.05.20 14.19

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.06.20 14.30

Basis: Wet Weight

Seq Number: 3118837

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 03.07.20 04.17       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 97                | %            | 70-130        | 03.07.20 04.17       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 03.07.20 04.17       |             |     |



# Certificate of Analytical Results 654843



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 04**  
Lab Sample Id: 654843-004

Matrix: Soil  
Date Collected: 03.05.20 14.25

Date Received: 03.06.20 14.27  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 796    | 5.02 | mg/kg | 03.06.20 22.37 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 03.07.20 02.46 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.8  | 49.8 | mg/kg | 03.07.20 02.46 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.8  | 49.8 | mg/kg | 03.07.20 02.46 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.8  | 49.8 | mg/kg | 03.07.20 02.46 | U    | 1   |
| Total TPH                          | PHC635     | <49.8  | 49.8 | mg/kg | 03.07.20 02.46 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 03.07.20 02.46 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 03.07.20 02.46 |      |



# Certificate of Analytical Results 654843



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 04**  
Lab Sample Id: 654843-004

Matrix: Soil  
Date Collected: 03.05.20 14.25

Date Received: 03.06.20 14.27  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118837

Date Prep: 03.06.20 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         | 03.07.20 04.38       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.38       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 03.07.20 04.38       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 03.07.20 04.38       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 05** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-005 Date Collected: 03.05.20 14.29 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 157    | 4.99 | mg/kg | 03.06.20 22.43 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.07.20 03.27 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.07.20 03.27 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.07.20 03.27 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.07.20 03.27 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.07.20 03.27 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 94         | %     | 70-135 | 03.07.20 03.27 |      |
| o-Terphenyl    | 84-15-1    | 99         | %     | 70-135 | 03.07.20 03.27 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 05**  
 Lab Sample Id: 654843-005

Matrix: Soil  
 Date Collected: 03.05.20 14.29

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118837

Date Prep: 03.06.20 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         | 03.07.20 04.59       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.07.20 04.59       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 100               | %            | 70-130        | 03.07.20 04.59       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 03.07.20 04.59       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 06** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-006 Date Collected: 03.05.20 14.45 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 440    | 24.9 | mg/kg | 03.06.20 22.58 |      | 5   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 03.07.20 03.48 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 03.07.20 03.48 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 03.07.20 03.48 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 03.07.20 03.48 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 03.07.20 03.48 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 92         | %     | 70-135 | 03.07.20 03.48 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 03.07.20 03.48 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 06**  
 Lab Sample Id: 654843-006

Matrix: Soil  
 Date Collected: 03.05.20 14.45

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118957

Date Prep: 03.07.20 09.00

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         | 03.07.20 11.49       | U           | 1   |
| Toluene              | 108-88-3          | <0.00201          | 0.00201      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00201          | 0.00201      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00402          | 0.00402      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00201          | 0.00201      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00201          | 0.00201      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| Total BTEX           |                   | <0.00201          | 0.00201      | mg/kg         | 03.07.20 11.49       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 106               | %            | 70-130        | 03.07.20 11.49       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 03.07.20 11.49       |             |     |



# Certificate of Analytical Results 654843



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 07**  
Lab Sample Id: 654843-007

Matrix: Soil  
Date Collected: 03.05.20 14.51

Date Received: 03.06.20 14.27  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 201    | 4.98 | mg/kg | 03.06.20 23.04 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.07.20 04.09 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.07.20 04.09 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.07.20 04.09 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.07.20 04.09 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.07.20 04.09 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 95         | %     | 70-135 | 03.07.20 04.09 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 03.07.20 04.09 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 07**  
 Lab Sample Id: 654843-007

Matrix: Soil  
 Date Collected: 03.05.20 14.51

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118957

Date Prep: 03.07.20 09.00

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         | 03.07.20 16.35       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.07.20 16.35       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 03.07.20 16.35       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 98                | %            | 70-130        | 03.07.20 16.35       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 08** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-008 Date Collected: 03.05.20 14.57 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 536    | 5.01 | mg/kg | 03.06.20 23.09 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.8  | 49.8 | mg/kg | 03.07.20 09.22 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | 154    | 49.8 | mg/kg | 03.07.20 09.22 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | 62.3   | 49.8 | mg/kg | 03.07.20 09.22 |      | 1   |
| Total GRO-DRO                      | PHC628     | 154    | 49.8 | mg/kg | 03.07.20 09.22 |      | 1   |
| Total TPH                          | PHC635     | 216    | 49.8 | mg/kg | 03.07.20 09.22 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 03.07.20 09.22 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 03.07.20 09.22 |      |



# Certificate of Analytical Results 654843



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 08**  
Lab Sample Id: 654843-008

Matrix: Soil  
Date Collected: 03.05.20 14.57

Date Received: 03.06.20 14.27  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.07.20 09.00

Basis: Wet Weight

Seq Number: 3118957

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00399          | 0.00399      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 03.07.20 18.50       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 97                | %            | 70-130        | 03.07.20 18.50       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 105               | %            | 70-130        | 03.07.20 18.50       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 09**  
 Lab Sample Id: 654843-009

Matrix: Soil  
 Date Collected: 03.05.20 15.02

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 430    | 4.99 | mg/kg | 03.06.20 23.14 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result      | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|-------------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0       | 50.0 | mg/kg | 03.07.20 04.52 | U    | 1   |
| <b>Diesel Range Organics (DRO)</b> | C10C28DRO  | <b>63.4</b> | 50.0 | mg/kg | 03.07.20 04.52 |      | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0       | 50.0 | mg/kg | 03.07.20 04.52 | U    | 1   |
| <b>Total GRO-DRO</b>               | PHC628     | <b>63.4</b> | 50.0 | mg/kg | 03.07.20 04.52 |      | 1   |
| <b>Total TPH</b>                   | PHC635     | <b>63.4</b> | 50.0 | mg/kg | 03.07.20 04.52 |      | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 97         | %     | 70-135 | 03.07.20 04.52 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 03.07.20 04.52 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 09**  
 Lab Sample Id: 654843-009

Matrix: Soil  
 Date Collected: 03.05.20 15.02

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118957

Date Prep: 03.07.20 09.00

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         | 03.07.20 19.11       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00401          | 0.00401      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 03.07.20 19.11       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 99                | %            | 70-130        | 03.07.20 19.11       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 03.07.20 19.11       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 10** Matrix: Soil Date Received: 03.06.20 14.27  
 Lab Sample Id: 654843-010 Date Collected: 03.05.20 15.10 Sample Depth: 0 - 4 ft  
 Analytical Method: Chloride by EPA 300 Prep Method: E300P  
 Tech: SPC % Moisture:  
 Analyst: SPC Date Prep: 03.06.20 17.35 Basis: Wet Weight  
 Seq Number: 3118843

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 707    | 4.99 | mg/kg | 03.06.20 23.19 |      | 1   |

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P  
 Tech: DVM % Moisture:  
 Analyst: ARM Date Prep: 03.06.20 16.00 Basis: Wet Weight  
 Seq Number: 3118868

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.07.20 05.13 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.07.20 05.13 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.07.20 05.13 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.07.20 05.13 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.07.20 05.13 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 96         | %     | 70-135 | 03.07.20 05.13 |      |
| o-Terphenyl    | 84-15-1    | 100        | %     | 70-135 | 03.07.20 05.13 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 10**  
 Lab Sample Id: 654843-010

Matrix: Soil  
 Date Collected: 03.05.20 15.10

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118957

Date Prep: 03.07.20 09.00

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         | 03.07.20 19.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00202          | 0.00202      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00202          | 0.00202      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00403          | 0.00403      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00202          | 0.00202      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00202          | 0.00202      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| Total BTEX           |                   | <0.00202          | 0.00202      | mg/kg         | 03.07.20 19.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 03.07.20 19.32       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 03.07.20 19.32       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 11**  
 Lab Sample Id: 654843-011

Matrix: Soil  
 Date Collected: 03.05.20 15.16

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 36.7   | 5.04 | mg/kg | 03.06.20 23.25 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 03.07.20 05.34 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 03.07.20 05.34 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 03.07.20 05.34 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 03.07.20 05.34 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 03.07.20 05.34 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 93         | %     | 70-135 | 03.07.20 05.34 |      |
| o-Terphenyl    | 84-15-1    | 97         | %     | 70-135 | 03.07.20 05.34 |      |



# Certificate of Analytical Results 654843



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 11**  
Lab Sample Id: 654843-011

Matrix: Soil  
Date Collected: 03.05.20 15.16

Date Received: 03.06.20 14.27  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.07.20 09.00

Basis: Wet Weight

Seq Number: 3118957

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 03.07.20 19.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 96                | %            | 70-130        | 03.07.20 19.52       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 104               | %            | 70-130        | 03.07.20 19.52       |             |     |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 12**  
 Lab Sample Id: 654843-012

Matrix: Soil  
 Date Collected: 03.05.20 15.21

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: SPC

Analyst: SPC

Seq Number: 3118843

Date Prep: 03.06.20 17.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 912    | 4.99 | mg/kg | 03.06.20 23.41 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3118868

Date Prep: 03.06.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 03.07.20 05.55 | U    | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 03.07.20 05.55 | U    | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 03.07.20 05.55 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 03.07.20 05.55 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 03.07.20 05.55 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 03.07.20 05.55 |      |
| o-Terphenyl    | 84-15-1    | 103        | %     | 70-135 | 03.07.20 05.55 |      |



# Certificate of Analytical Results 654843

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW 12**  
 Lab Sample Id: 654843-012

Matrix: Soil  
 Date Collected: 03.05.20 15.21

Date Received: 03.06.20 14.27  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3118957

Date Prep: 03.07.20 09.00

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         | 03.07.20 20.13       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| Total Xylenes        | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.07.20 20.13       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 93                | %            | 70-130        | 03.07.20 20.13       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 85                | %            | 70-130        | 03.07.20 20.13       |             |     |



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

+ NELAC certification not offered for this compound.

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



## LT Environmental, Inc.

EMSU WSW 278

## Analytical Method: Chloride by EPA 300

Seq Number: 3118843

MB Sample Id: 7698294-1-BLK

Matrix: Solid

LCS Sample Id: 7698294-1-BKS

Prep Method: E300P

Date Prep: 03.06.20

LCSD Sample Id: 7698294-1-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          | 240        | 96       | 240         | 96        | 90-110 | 0    | 20        | mg/kg | 03.06.20 22:01 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3118843

Parent Sample Id: 654843-001

Matrix: Soil

MS Sample Id: 654843-001 S

Prep Method: E300P

Date Prep: 03.06.20

MSD Sample Id: 654843-001 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 280           | 249          | 464       | 74      | 464        | 74       | 90-110 | 0    | 20        | mg/kg | 03.06.20 22:16 | X    |

## Analytical Method: Chloride by EPA 300

Seq Number: 3118843

Parent Sample Id: 654843-011

Matrix: Soil

MS Sample Id: 654843-011 S

Prep Method: E300P

Date Prep: 03.06.20

MSD Sample Id: 654843-011 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 36.7          | 252          | 284       | 98      | 284        | 98       | 90-110 | 0    | 20        | mg/kg | 03.06.20 23:30 |      |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3118868

MB Sample Id: 7698316-1-BLK

Matrix: Solid

LCS Sample Id: 7698316-1-BKS

Prep Method: SW8015P

Date Prep: 03.06.20

LCSD Sample Id: 7698316-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 1080       | 108      | 1060        | 106       | 70-135 | 2    | 20        | mg/kg | 03.06.20 22:12 |      |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 1190       | 119      | 1190        | 119       | 70-135 | 0    | 20        | mg/kg | 03.06.20 22:12 |      |

| Surrogate      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 99      |         | 114      |          | 111       |           | 70-135 | %     | 03.06.20 22:12 |
| o-Terphenyl    | 106     |         | 115      |          | 114       |           | 70-135 | %     | 03.06.20 22:12 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3118868

Matrix: Solid

MB Sample Id: 7698316-1-BLK

Prep Method: SW8015P

Date Prep: 03.06.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 03.06.20 21:51 |      |

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

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

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.

EMSU WSW 278

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3118868

Parent Sample Id: 654761-001

Matrix: Soil

MS Sample Id: 654761-001 S

Prep Method: SW8015P

Date Prep: 03.06.20

MSD Sample Id: 654761-001 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) | 20.2          | 998          | 1030      | 101     | 1040       | 102      | 70-135 | 1    | 20        | mg/kg | 03.06.20 23:16 |      |
| Diesel Range Organics (DRO)       | 61.5          | 998          | 1100      | 104     | 1120       | 106      | 70-135 | 2    | 20        | mg/kg | 03.06.20 23:16 |      |

| Surrogate      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 107     |         | 108      |          | 70-135 | %     | 03.06.20 23:16 |
| o-Terphenyl    | 109     |         | 109      |          | 70-135 | %     | 03.06.20 23:16 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3118837

MB Sample Id: 7698306-1-BLK

Matrix: Solid

LCS Sample Id: 7698306-1-BKS

Prep Method: SW5030B

Date Prep: 03.06.20

LCSD Sample Id: 7698306-1-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        | 0.0904     | 90       | 0.0921      | 92        | 70-130 | 2    | 35        | mg/kg | 03.06.20 17:34 |      |
| Toluene      | <0.00200  | 0.100        | 0.0934     | 93       | 0.0952      | 95        | 70-130 | 2    | 35        | mg/kg | 03.06.20 17:34 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0929     | 93       | 0.101       | 101       | 70-130 | 8    | 35        | mg/kg | 03.06.20 17:34 |      |
| m,p-Xylenes  | <0.00400  | 0.200        | 0.173      | 87       | 0.197       | 99        | 70-130 | 13   | 35        | mg/kg | 03.06.20 17:34 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0882     | 88       | 0.0992      | 99        | 70-130 | 12   | 35        | mg/kg | 03.06.20 17:34 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 93      |         | 87       |          | 89        |           | 70-130 | %     | 03.06.20 17:34 |
| 4-Bromofluorobenzene | 109     |         | 92       |          | 103       |           | 70-130 | %     | 03.06.20 17:34 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3118957

MB Sample Id: 7698397-1-BLK

Matrix: Solid

LCS Sample Id: 7698397-1-BKS

Prep Method: SW5030B

Date Prep: 03.07.20

LCSD Sample Id: 7698397-1-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        | 0.0995     | 100      | 0.0958      | 95        | 70-130 | 4    | 35        | mg/kg | 03.07.20 06:31 |      |
| Toluene      | <0.00200  | 0.100        | 0.0928     | 93       | 0.0934      | 92        | 70-130 | 1    | 35        | mg/kg | 03.07.20 06:31 |      |
| Ethylbenzene | <0.00200  | 0.100        | 0.0941     | 94       | 0.0989      | 98        | 70-130 | 5    | 35        | mg/kg | 03.07.20 06:31 |      |
| m,p-Xylenes  | <0.00401  | 0.200        | 0.179      | 90       | 0.196       | 98        | 70-130 | 9    | 35        | mg/kg | 03.07.20 06:31 |      |
| o-Xylene     | <0.00200  | 0.100        | 0.0908     | 91       | 0.100       | 99        | 70-130 | 10   | 35        | mg/kg | 03.07.20 06:31 |      |

| Surrogate            | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 95      |         | 93       |          | 92        |           | 70-130 | %     | 03.07.20 06:31 |
| 4-Bromofluorobenzene | 100     |         | 95       |          | 110       |           | 70-130 | %     | 03.07.20 06:31 |

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

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

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

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



## LT Environmental, Inc.

EMSU WSW 278

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3118837

Parent Sample Id: 654762-007

Matrix: Soil

MS Sample Id: 654762-007 S

Prep Method: SW5030B

Date Prep: 03.06.20

MSD Sample Id: 654762-007 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       | 0.0901    | 91      | 0.0883     | 88       | 70-130 | 2    | 35        | mg/kg | 03.06.20 18:15 |      |
| Toluene      | <0.00198      | 0.0992       | 0.0928    | 94      | 0.0900     | 90       | 70-130 | 3    | 35        | mg/kg | 03.06.20 18:15 |      |
| Ethylbenzene | <0.00198      | 0.0992       | 0.0962    | 97      | 0.0932     | 93       | 70-130 | 3    | 35        | mg/kg | 03.06.20 18:15 |      |
| m,p-Xylenes  | <0.00397      | 0.198        | 0.186     | 94      | 0.181      | 91       | 70-130 | 3    | 35        | mg/kg | 03.06.20 18:15 |      |
| o-Xylene     | <0.00198      | 0.0992       | 0.0941    | 95      | 0.0915     | 92       | 70-130 | 3    | 35        | mg/kg | 03.06.20 18:15 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 89      |         | 90       |          | 70-130 | %     | 03.06.20 18:15 |
| 4-Bromofluorobenzene | 102     |         | 103      |          | 70-130 | %     | 03.06.20 18:15 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3118957

Parent Sample Id: 654855-001

Matrix: Soil

MS Sample Id: 654855-001 S

Prep Method: SW5030B

Date Prep: 03.07.20

MSD Sample Id: 654855-001 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.00198      | 0.0990       | 0.0900    | 91      | 0.0884     | 88       | 70-130 | 2    | 35        | mg/kg | 03.07.20 07:13 |      |
| Toluene      | <0.00198      | 0.0990       | 0.0808    | 82      | 0.0780     | 77       | 70-130 | 4    | 35        | mg/kg | 03.07.20 07:13 |      |
| Ethylbenzene | <0.00198      | 0.0990       | 0.0763    | 77      | 0.0723     | 72       | 70-130 | 5    | 35        | mg/kg | 03.07.20 07:13 |      |
| m,p-Xylenes  | <0.00396      | 0.198        | 0.147     | 74      | 0.138      | 68       | 70-130 | 6    | 35        | mg/kg | 03.07.20 07:13 | X    |
| o-Xylene     | <0.00198      | 0.0990       | 0.0746    | 75      | 0.0703     | 70       | 70-130 | 6    | 35        | mg/kg | 03.07.20 07:13 |      |

| Surrogate            | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 93      |         | 96       |          | 70-130 | %     | 03.07.20 07:13 |
| 4-Bromofluorobenzene | 101     |         | 100      |          | 70-130 | %     | 03.07.20 07:13 |

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: 154643

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 Littlell                        |
| Company Name:    | LT Environmental, Inc., Permian office | Company Name:           | XTO Energy                           |
| Address:         | 3300 North A Street                    | Address:                | 3104 East Green Street               |
| City, State ZIP: | Midland, TX 79705                      | City, State ZIP:        | Carlsbad, NM 88220                   |
| Phone:           | (432) 236-3849                         | Email:                  | rkkaushik@ltenv.com, dmair@ltenv.com |

|                 |               |             |                                     |
|-----------------|---------------|-------------|-------------------------------------|
| Project Name:   | EMSU WSW 298  | Turn Around | 24 hr                               |
| Project Number: | 012920009     | Routine     | <input checked="" type="checkbox"/> |
| P.O. Number:    | lea           | Rush:       | 24 hr                               |
| Sampler's Name: | Rahul Kaushik | Due Date:   |                                     |

|                       |                                     |                    |                                     |
|-----------------------|-------------------------------------|--------------------|-------------------------------------|
| Temp Blank:           | <input checked="" type="checkbox"/> | Wet Ice:           | <input checked="" type="checkbox"/> |
| Temperature (°C):     | 15.0                                | Thermometer ID     | 19                                  |
| Received Intact:      | <input checked="" type="checkbox"/> | Correction Factor: | -0.3                                |
| Cooler Custody Seals: | Yes No                              | Total Containers:  | 10                                  |
| Sample Custody Seals: | Yes No                              |                    |                                     |

| Sample Identification | Matrix | Date Sampled | Time Sampled | Depth | Number | TPH (EP) | BTEX (E) | Chloride |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |
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Composite Composite

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

Sample Comments

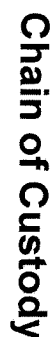
Total 200.7 / 6010 200.8 / 6020:

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr 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 |
| Rahul Kaushik                | Rahul Kaushik            | 3/10/20   |                              |                          |           |
|                              |                          |           |                              |                          |           |
|                              |                          |           |                              |                          |           |
|                              |                          |           |                              |                          |           |
|                              |                          |           |                              |                          |           |



Id: JS4843

Page 2 of 2

| Work Order Comments |                                                                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program: UST/PST    | <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RC <input type="checkbox"/> Superfund <input type="checkbox"/>   |
| State of Project:   |                                                                                                                                                             |
| Reporting Level II  | <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/> |
| Deliverables: EDD   | <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:                                                                                              |

| SAMPLE RECEIPT        |        | Temp Blank:     | Yes | No | Wet Ice:           | Yes  | No |
|-----------------------|--------|-----------------|-----|----|--------------------|------|----|
| Temperature (°C):     | 2-36.4 | Thermometer ID: |     |    |                    |      |    |
| Received Intact:      | Yes    | No              |     |    |                    |      |    |
| Cooler Custody Seals: | Yes    | No              | QMA |    | Correction Factor: | -0.3 |    |
| Sample Custody Seals: | Yes    | No              | QMA |    | Total Containers:  | 2    |    |

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]

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 <i>Te Wei Koushuk</i>      | <i>[Signature]</i>       |           | 2                            |                          |           |
| 3                            |                          |           | 4                            |                          |           |
| 5                            |                          |           | 6                            |                          |           |

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.06.2020 02.27.00 PM

Work Order #: 654843

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

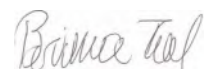
| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 6.6      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received 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#:

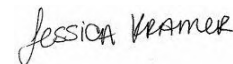
Checklist completed by:



Brianna Teel

Date: 03.06.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.09.2020

# Analytical Report 656667

for  
**LT Environmental, Inc.**

**Project Manager: Tacoma Morrissey**

**EMSU WSW 278**

**012919208**

**25-MAR-20**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-Carlsbad (LELAP): Louisiana (05092)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



25-MAR-20

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

Reference: XENCO Report No(s): **656667**  
**EMSU WSW 278**  
Project Address:

**Tacoma Morrissey:**

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) 656667. 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. 656667 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Manager

***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 656667****LT Environmental, Inc., Arvada, CO**

EMSU WSW 278

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW13      | S      | 03-23-20 13:15 | 0 - 4 ft     | 656667-001    |
| SW14      | S      | 03-23-20 14:00 | 0 - 4 ft     | 656667-002    |
| SW15      | S      | 03-23-20 14:30 | 0 - 4 ft     | 656667-003    |

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: EMSU WSW 278**Project ID: 012919208  
Work Order Number(s): 656667Report Date: 25-MAR-20  
Date Received: 03/24/2020

---

**Sample receipt non conformances and comments:**

---

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

None

**Analytical non conformances and comments:**

Batch: LBA-3120844 BTEX by EPA 8021B

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

Batch: LBA-3120866 TPH by SW8015 Mod

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) recovered below QC limits in the laboratory control sample indicating bias low results. Samples in the analytical batch are: 656667-001, -002, -003.

Diesel Range Organics (DRO), Gasoline Range Hydrocarbons (GRO) RPD was outside laboratory control limits.

Samples in the analytical batch are: 656667-001, -002, -003

Surrogate 1-Chlorooctane, Surrogate o-Terphenyl recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7699652-1-BKS.

Poor injection on the BKS resulted in low recovery, MS/MSD show recovery for the batch.



# Certificate of Analysis Summary 656667

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278

**Project Id:** 012919208  
**Contact:** Tacoma Morrissey  
**Project Location:**

**Date Received in Lab:** Tue Mar-24-20 02:05 pm  
**Report Date:** 25-MAR-20  
**Project Manager:** Jessica Kramer

| <i>Analysis Requested</i>          | <i>Lab Id:</i>    | 656667-001       | 656667-002       | 656667-003       |  |  |  |
|------------------------------------|-------------------|------------------|------------------|------------------|--|--|--|
|                                    | <i>Field Id:</i>  | SW13             | SW14             | SW15             |  |  |  |
|                                    | <i>Depth:</i>     | 0-4 ft           | 0-4 ft           | 0-4 ft           |  |  |  |
|                                    | <i>Matrix:</i>    | SOIL             | SOIL             | SOIL             |  |  |  |
|                                    | <i>Sampled:</i>   | Mar-23-20 13:15  | Mar-23-20 14:00  | Mar-23-20 14:30  |  |  |  |
| <b>BTEX by EPA 8021B</b>           | <i>Extracted:</i> | *** ** *         | *** ** *         | *** ** *         |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-24-20 15:32  | Mar-24-20 15:52  | Mar-24-20 16:12  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Benzene                            |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| Toluene                            |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| Ethylbenzene                       |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| m,p-Xylenes                        |                   | <0.00397 0.00397 | <0.00398 0.00398 | <0.00400 0.00400 |  |  |  |
| o-Xylene                           |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| Xylenes, Total                     |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| Total BTEX                         |                   | <0.00198 0.00198 | <0.00199 0.00199 | <0.00200 0.00200 |  |  |  |
| <b>Chloride by EPA 300</b>         | <i>Extracted:</i> | Mar-24-20 16:35  | Mar-24-20 16:35  | Mar-24-20 16:35  |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-25-20 02:46  | Mar-25-20 03:02  | Mar-25-20 03:07  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Chloride                           |                   | 1030 4.98        | 37.2 4.95        | 48.9 4.99        |  |  |  |
| <b>TPH by SW8015 Mod</b>           | <i>Extracted:</i> | Mar-24-20 16:00  | Mar-24-20 16:00  | Mar-24-20 16:00  |  |  |  |
|                                    | <i>Analyzed:</i>  | Mar-25-20 03:45  | Mar-25-20 04:03  | Mar-25-20 04:22  |  |  |  |
|                                    | <i>Units/RL:</i>  | mg/kg RL         | mg/kg RL         | mg/kg RL         |  |  |  |
| Gasoline Range Hydrocarbons (GRO)  |                   | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       |  |  |  |
| Diesel Range Organics (DRO)        |                   | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       |  |  |  |
| Motor Oil Range Hydrocarbons (MRO) |                   | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       |  |  |  |
| Total GRO-DRO                      |                   | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       |  |  |  |
| Total TPH                          |                   | <49.9 49.9       | <50.0 50.0       | <50.0 50.0       |  |  |  |

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

Version: 1.0%

Jessica Kramer  
Project Manager



# Certificate of Analytical Results 656667



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW13**  
Lab Sample Id: 656667-001

Matrix: Soil  
Date Collected: 03.23.20 13.15

Date Received: 03.24.20 14.05  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3120808

Date Prep: 03.24.20 16.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 1030   | 4.98 | mg/kg | 03.25.20 02.46 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120866

Date Prep: 03.24.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <49.9  | 49.9 | mg/kg | 03.25.20 03.45 | UFL  | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <49.9  | 49.9 | mg/kg | 03.25.20 03.45 | UFL  | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <49.9  | 49.9 | mg/kg | 03.25.20 03.45 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <49.9  | 49.9 | mg/kg | 03.25.20 03.45 | U    | 1   |
| Total TPH                          | PHC635     | <49.9  | 49.9 | mg/kg | 03.25.20 03.45 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 82         | %     | 70-135 | 03.25.20 03.45 |      |
| o-Terphenyl    | 84-15-1    | 86         | %     | 70-135 | 03.25.20 03.45 |      |



# Certificate of Analytical Results 656667

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW13**  
 Lab Sample Id: 656667-001

Matrix: Soil  
 Date Collected: 03.23.20 13.15

Date Received: 03.24.20 14.05  
 Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.24.20 09.00

Basis: Wet Weight

Seq Number: 3120844

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| Toluene              | 108-88-3          | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00397          | 0.00397      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| Total BTEX           |                   | <0.00198          | 0.00198      | mg/kg         | 03.24.20 15.32       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 4-Bromofluorobenzene | 460-00-4          | 74                | %            | 70-130        | 03.24.20 15.32       |             |     |
| 1,4-Difluorobenzene  | 540-36-3          | 107               | %            | 70-130        | 03.24.20 15.32       |             |     |



# Certificate of Analytical Results 656667



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW14**  
Lab Sample Id: 656667-002

Matrix: Soil  
Date Collected: 03.23.20 14.00

Date Received: 03.24.20 14.05  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3120808

Date Prep: 03.24.20 16.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 37.2   | 4.95 | mg/kg | 03.25.20 03.02 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120866

Date Prep: 03.24.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.25.20 04.03 | UFL  | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.25.20 04.03 | UFL  | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.25.20 04.03 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.25.20 04.03 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.25.20 04.03 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 98         | %     | 70-135 | 03.25.20 04.03 |      |
| o-Terphenyl    | 84-15-1    | 102        | %     | 70-135 | 03.25.20 04.03 |      |



# Certificate of Analytical Results 656667



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW14**  
Lab Sample Id: 656667-002

Matrix: Soil  
Date Collected: 03.23.20 14.00

Date Received: 03.24.20 14.05  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3120844

Date Prep: 03.24.20 09.00

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         | 03.24.20 15.52       | U           | 1   |
| Toluene              | 108-88-3          | <0.00199          | 0.00199      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00199          | 0.00199      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00398          | 0.00398      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00199          | 0.00199      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00199          | 0.00199      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| Total BTEX           |                   | <0.00199          | 0.00199      | mg/kg         | 03.24.20 15.52       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 118               | %            | 70-130        | 03.24.20 15.52       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 85                | %            | 70-130        | 03.24.20 15.52       |             |     |



# Certificate of Analytical Results 656667

## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW15**  
 Lab Sample Id: 656667-003

Matrix: Soil  
 Date Collected: 03.23.20 14.30

Date Received: 03.24.20 14.05  
 Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3120808

Date Prep: 03.24.20 16.35

Prep Method: E300P

% Moisture:

Basis: Wet Weight

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 48.9   | 4.99 | mg/kg | 03.25.20 03.07 |      | 1   |

Analytical Method: TPH by SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3120866

Date Prep: 03.24.20 16.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

| Parameter                          | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|------------------------------------|------------|--------|------|-------|----------------|------|-----|
| Gasoline Range Hydrocarbons (GRO)  | PHC610     | <50.0  | 50.0 | mg/kg | 03.25.20 04.22 | UFL  | 1   |
| Diesel Range Organics (DRO)        | C10C28DRO  | <50.0  | 50.0 | mg/kg | 03.25.20 04.22 | UFL  | 1   |
| Motor Oil Range Hydrocarbons (MRO) | PHCG2835   | <50.0  | 50.0 | mg/kg | 03.25.20 04.22 | U    | 1   |
| Total GRO-DRO                      | PHC628     | <50.0  | 50.0 | mg/kg | 03.25.20 04.22 | U    | 1   |
| Total TPH                          | PHC635     | <50.0  | 50.0 | mg/kg | 03.25.20 04.22 | U    | 1   |

| Surrogate      | Cas Number | % Recovery | Units | Limits | Analysis Date  | Flag |
|----------------|------------|------------|-------|--------|----------------|------|
| 1-Chlorooctane | 111-85-3   | 84         | %     | 70-135 | 03.25.20 04.22 |      |
| o-Terphenyl    | 84-15-1    | 88         | %     | 70-135 | 03.25.20 04.22 |      |



# Certificate of Analytical Results 656667



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW15**  
Lab Sample Id: 656667-003

Matrix: Soil  
Date Collected: 03.23.20 14.30

Date Received: 03.24.20 14.05  
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 03.24.20 09.00

Basis: Wet Weight

Seq Number: 3120844

| Parameter            | Cas Number        | Result            | RL           | Units         | Analysis Date        | Flag        | Dil |
|----------------------|-------------------|-------------------|--------------|---------------|----------------------|-------------|-----|
| Benzene              | 71-43-2           | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| Toluene              | 108-88-3          | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| Ethylbenzene         | 100-41-4          | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| m,p-Xylenes          | 179601-23-1       | <0.00400          | 0.00400      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| o-Xylene             | 95-47-6           | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| Xylenes, Total       | 1330-20-7         | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| Total BTEX           |                   | <0.00200          | 0.00200      | mg/kg         | 03.24.20 16.12       | U           | 1   |
| <b>Surrogate</b>     | <b>Cas Number</b> | <b>% Recovery</b> | <b>Units</b> | <b>Limits</b> | <b>Analysis Date</b> | <b>Flag</b> |     |
| 1,4-Difluorobenzene  | 540-36-3          | 116               | %            | 70-130        | 03.24.20 16.12       |             |     |
| 4-Bromofluorobenzene | 460-00-4          | 82                | %            | 70-130        | 03.24.20 16.12       |             |     |



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

+ NELAC certification not offered for this compound.

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



## LT Environmental, Inc.

EMSU WSW 278

## Analytical Method: Chloride by EPA 300

Seq Number: 3120808

MB Sample Id: 7699638-1-BLK

Matrix: Solid

LCS Sample Id: 7699638-1-BKS

Prep Method: E300P

Date Prep: 03.24.20

LCSD Sample Id: 7699638-1-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          | 263        | 105      | 262         | 105       | 90-110 | 0    | 20        | mg/kg | 03.25.20 01:01 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3120808

Parent Sample Id: 656579-002

Matrix: Soil

MS Sample Id: 656579-002 S

Prep Method: E300P

Date Prep: 03.24.20

MSD Sample Id: 656579-002 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 430           | 250          | 660       | 92      | 660        | 92       | 90-110 | 0    | 20        | mg/kg | 03.25.20 01:17 |      |

## Analytical Method: Chloride by EPA 300

Seq Number: 3120808

Parent Sample Id: 656579-006

Matrix: Soil

MS Sample Id: 656579-006 S

Prep Method: E300P

Date Prep: 03.24.20

MSD Sample Id: 656579-006 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 37.3          | 250          | 287       | 100     | 321        | 113      | 90-110 | 11   | 20        | mg/kg | 03.25.20 02:31 | X    |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3120866

MB Sample Id: 7699652-1-BLK

Matrix: Solid

LCS Sample Id: 7699652-1-BKS

Prep Method: SW8015P

Date Prep: 03.24.20

LCSD Sample Id: 7699652-1-BSD

| Parameter                         | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------------------------------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Gasoline Range Hydrocarbons (GRO) | <15.0     | 1000         | 17.2       | 2        | 831         | 83        | 70-135 | 192  | 20        | mg/kg | 03.25.20 02:11 | LF   |
| Diesel Range Organics (DRO)       | <15.0     | 1000         | 19.7       | 2        | 879         | 88        | 70-135 | 191  | 20        | mg/kg | 03.25.20 02:11 | LF   |

## Surrogate

|                | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1-Chlorooctane | 84      |         | 0        | **       | 96        |           | 70-135 | %     | 03.25.20 02:11 |
| o-Terphenyl    | 90      |         | 0        | **       | 105       |           | 70-135 | %     | 03.25.20 02:11 |

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3120866

Matrix: Solid

MB Sample Id: 7699652-1-BLK

Prep Method: SW8015P

Date Prep: 03.24.20

| Parameter                          | MB Result | Units | Analysis Date  | Flag |
|------------------------------------|-----------|-------|----------------|------|
| Motor Oil Range Hydrocarbons (MRO) | <50.0     | mg/kg | 03.25.20 01:52 |      |

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

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

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.

EMSU WSW 278

## Analytical Method: TPH by SW8015 Mod

Seq Number: 3120866

Parent Sample Id: 656574-001

Matrix: Soil

MS Sample Id: 656574-001 S

Prep Method: SW8015P

Date Prep: 03.24.20

MSD Sample Id: 656574-001 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) | <15.0         | 997          | 819       | 82      | 817        | 82       | 70-135 | 0    | 20        | mg/kg | 03.25.20 03:07 |      |
| Diesel Range Organics (DRO)       | <15.0         | 997          | 867       | 87      | 866        | 87       | 70-135 | 0    | 20        | mg/kg | 03.25.20 03:07 |      |

## Surrogate

|                | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------|---------|---------|----------|----------|--------|-------|----------------|
| 1-Chlorooctane | 102     |         | 102      |          | 70-135 | %     | 03.25.20 03:07 |
| o-Terphenyl    | 113     |         | 113      |          | 70-135 | %     | 03.25.20 03:07 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3120844

MB Sample Id: 7699674-1-BLK

Matrix: Solid

LCS Sample Id: 7699674-1-BKS

Prep Method: SW5030B

Date Prep: 03.24.20

LCSD Sample Id: 7699674-1-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        | 0.0965     | 97       | 0.0918      | 92        | 70-130 | 5    | 35        | mg/kg | 03.24.20 08:53 |      |
| Toluene      | <0.000456 | 0.100        | 0.0997     | 100      | 0.0982      | 98        | 70-130 | 2    | 35        | mg/kg | 03.24.20 08:53 |      |
| Ethylbenzene | <0.000565 | 0.100        | 0.0999     | 100      | 0.0984      | 98        | 70-130 | 2    | 35        | mg/kg | 03.24.20 08:53 |      |
| m,p-Xylenes  | <0.00101  | 0.200        | 0.198      | 99       | 0.196       | 98        | 70-130 | 1    | 35        | mg/kg | 03.24.20 08:53 |      |
| o-Xylene     | <0.000344 | 0.100        | 0.0994     | 99       | 0.0987      | 99        | 70-130 | 1    | 35        | mg/kg | 03.24.20 08:53 |      |

## Surrogate

|                      | MB %Rec | MB Flag | LCS %Rec | LCS Flag | LCSD %Rec | LCSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|-----------|-----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 107     |         | 110      |          | 110       |           | 70-130 | %     | 03.24.20 08:53 |
| 4-Bromofluorobenzene | 74      |         | 91       |          | 92        |           | 70-130 | %     | 03.24.20 08:53 |

## Analytical Method: BTEX by EPA 8021B

Seq Number: 3120844

Parent Sample Id: 656404-005

Matrix: Soil

MS Sample Id: 656404-005 S

Prep Method: SW5030B

Date Prep: 03.24.20

MSD Sample Id: 656404-005 SD

| Parameter    | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|--------------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Benzene      | <0.000383     | 0.0996       | 0.0813    | 82      | 0.0804     | 81       | 70-130 | 1    | 35        | mg/kg | 03.24.20 09:33 |      |
| Toluene      | <0.000454     | 0.0996       | 0.0866    | 87      | 0.0858     | 86       | 70-130 | 1    | 35        | mg/kg | 03.24.20 09:33 |      |
| Ethylbenzene | <0.000563     | 0.0996       | 0.0863    | 87      | 0.0838     | 84       | 70-130 | 3    | 35        | mg/kg | 03.24.20 09:33 |      |
| m,p-Xylenes  | <0.00101      | 0.199        | 0.168     | 84      | 0.162      | 82       | 70-130 | 4    | 35        | mg/kg | 03.24.20 09:33 |      |
| o-Xylene     | <0.000343     | 0.0996       | 0.0865    | 87      | 0.0856     | 86       | 70-130 | 1    | 35        | mg/kg | 03.24.20 09:33 |      |

## Surrogate

|                      | MS %Rec | MS Flag | MSD %Rec | MSD Flag | Limits | Units | Analysis Date  |
|----------------------|---------|---------|----------|----------|--------|-------|----------------|
| 1,4-Difluorobenzene  | 112     |         | 120      |          | 70-130 | %     | 03.24.20 09:33 |
| 4-Bromofluorobenzene | 87      |         | 94       |          | 70-130 | %     | 03.24.20 09:33 |

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

$[D] = 100 * (C - A) / B$   
 $RPD = 200 * |(C - E) / (C + E)|$   
 $[D] = 100 * (C) / [B]$   
 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:**

15/05/20

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 (770-449-3800) Tampa, FL (813-291-1111)

[www.xenico.com](http://www.xenico.com)

Page \_\_\_\_\_ of \_\_\_\_\_

|                  |                        |                         |                                          |
|------------------|------------------------|-------------------------|------------------------------------------|
| Project Manager: | Tacoma Morrissey       | Bill to: (if different) |                                          |
| Company Name:    | LT Environmental, Inc. | Company Name:           |                                          |
| Address:         | 3300 North A Street    | Address:                |                                          |
| City, State ZIP: | Midland, TX 79705      | City, State ZIP:        |                                          |
| Phone:           | 432.704.5178           | Email:                  | fmorrissey@ltenv.com, cwhtaley@ltenv.com |

| Work Order Comments |                                    |                                     |                                            |                                                                                                 |
|---------------------|------------------------------------|-------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------|
| Program: UST/PST    | <input type="checkbox"/> RP        | <input type="checkbox"/> Downfields | <input checked="" type="checkbox"/> R      | <input type="checkbox"/> \$ <input type="checkbox"/> Depthund <input type="checkbox"/>          |
| State of Project:   |                                    |                                     |                                            |                                                                                                 |
| Reporting Level II  | <input type="checkbox"/> Level III | <input type="checkbox"/> T/UST      | <input type="checkbox"/> T <sub>1</sub> RP | <input type="checkbox"/> L <sub>1</sub> <input type="checkbox"/> sl IV <input type="checkbox"/> |
| Deliverables: EDD   | <input type="checkbox"/>           | ADAPT                               | <input type="checkbox"/>                   | Other:                                                                                          |

[illegible]

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

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]

Charles

\_\_\_\_\_  
 Approved by (Signature)

14.8

Date/Time

Al, Fe, Mn, Ni, Pb, Pt, Rb, S, Sr, Ti, U, V, Zn, Zr, Ba, Be, Bi, Br, Ca, Cd, Co, Cr, Cs, Cu, F, Ga, Ge, H, Hg, In, K, Li, Mg, Mo, Na, Nb, N, O, P, Se, Si, Sn, Ta, Te, Th, Tl, W, Y, Z.

Revised Date: 05/4/18 Rev. 2018.1

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.24.2020 02.05.00 PM

Work Order #: 656667

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

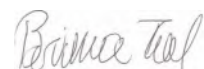
| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 3.6      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received on ice?                            | Yes      |
| #4 *Custody Seals intact on shipping container/ cooler? | 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#:

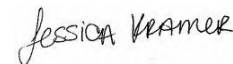
Checklist completed by:



Brianna Teel

Date: 03.24.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.25.2020

# Analytical Report 657325

for  
**LT Environmental, Inc.**

**Project Manager: Tacoma Morrissey**

**EMSU WSW 278**

**012919208**

**31-MAR-20**

Collected By: Client



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

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

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

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



31-MAR-20

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

Reference: XENCO Report No(s): **657325**  
**EMSU WSW 278**  
Project Address:

**Tacoma Morrissey:**

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) 657325. 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. 657325 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'.

**Jessica Kramer**

Project Manager

***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 657325

LT Environmental, Inc., Arvada, CO

EMSU WSW 278

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|-----------|--------|----------------|--------------|---------------|
| SW16      | S      | 03-30-20 00:00 | 0 - 4 ft     | 657325-001    |



## CASE NARRATIVE

**Client Name:** *LT Environmental, Inc.*

**Project Name:** *EMSU WSW 278*

Project ID: 012919208

Work Order Number(s): 657325

Report Date: 31-MAR-20

Date Received: 03/30/2020

---

**Sample receipt non conformances and comments:**

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

None



# Certificate of Analysis Summary 657325

LT Environmental, Inc., Arvada, CO

Project Name: EMSU WSW 278



**Project Id:** 012919208  
**Contact:** Tacoma Morrissey  
**Project Location:**

**Date Received in Lab:** Mon Mar-30-20 04:42 pm  
**Report Date:** 31-MAR-20  
**Project Manager:** Jessica Kramer

|                            |                   |                 |  |  |  |  |  |
|----------------------------|-------------------|-----------------|--|--|--|--|--|
| <b>Analysis Requested</b>  | <b>Lab Id:</b>    | 657325-001      |  |  |  |  |  |
|                            | <b>Field Id:</b>  | SW16            |  |  |  |  |  |
|                            | <b>Depth:</b>     | 0-4 ft          |  |  |  |  |  |
|                            | <b>Matrix:</b>    | SOIL            |  |  |  |  |  |
|                            | <b>Sampled:</b>   | Mar-30-20 00:00 |  |  |  |  |  |
| <b>Chloride by EPA 300</b> | <b>Extracted:</b> | Mar-31-20 08:40 |  |  |  |  |  |
|                            | <b>Analyzed:</b>  | Mar-31-20 11:25 |  |  |  |  |  |
|                            | <b>Units/RL:</b>  | mg/kg RL        |  |  |  |  |  |
| Chloride                   |                   | 147 4.97        |  |  |  |  |  |

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: 1.0%

Jessica Kramer  
Project Manager



## Certificate of Analytical Results 657325



## LT Environmental, Inc., Arvada, CO

EMSU WSW 278

Sample Id: **SW16**  
Lab Sample Id: 657325-001

Matrix: Soil  
Date Collected: 03.30.20 00.00

Date Received: 03.30.20 16.42  
Sample Depth: 0 - 4 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 03.31.20 08.40

Basis: Wet Weight

Seq Number: 3121466

| Parameter | Cas Number | Result | RL   | Units | Analysis Date  | Flag | Dil |
|-----------|------------|--------|------|-------|----------------|------|-----|
| Chloride  | 16887-00-6 | 147    | 4.97 | mg/kg | 03.31.20 11.25 |      | 1   |



## Flagging Criteria



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

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

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

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

**DL** Method Detection Limit

**NC** Non-Calculable

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

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

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

+ NELAC certification not offered for this compound.

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



**LT Environmental, Inc.**  
**EMSU WSW 278**

**Analytical Method: Chloride by EPA 300**

Seq Number: 3121466

MB Sample Id: 7700111-1-BLK

Matrix: Solid

LCS Sample Id: 7700111-1-BKS

Prep Method: E300P

Date Prep: 03.31.20

LCSD Sample Id: 7700111-1-BSD

| Parameter | MB Result | Spike Amount | LCS Result | LCS %Rec | LCSD Result | LCSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|-----------|--------------|------------|----------|-------------|-----------|--------|------|-----------|-------|----------------|------|
| Chloride  | <5.00     | 250          | 251        | 100      | 250         | 100       | 90-110 | 0    | 20        | mg/kg | 03.31.20 09:24 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3121466

Parent Sample Id: 657220-015

Matrix: Soil

MS Sample Id: 657220-015 S

Prep Method: E300P

Date Prep: 03.31.20

MSD Sample Id: 657220-015 SD

| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 239           | 252          | 478       | 95      | 475        | 94       | 90-110 | 1    | 20        | mg/kg | 03.31.20 09:40 |      |

**Analytical Method: Chloride by EPA 300**

Seq Number: 3121466

Parent Sample Id: 657237-001

Matrix: Soil

MS Sample Id: 657237-001 S

Prep Method: E300P

Date Prep: 03.31.20

MSD Sample Id: 657237-001 SD

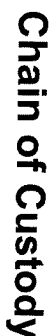
| Parameter | Parent Result | Spike Amount | MS Result | MS %Rec | MSD Result | MSD %Rec | Limits | %RPD | RPD Limit | Units | Analysis Date  | Flag |
|-----------|---------------|--------------|-----------|---------|------------|----------|--------|------|-----------|-------|----------------|------|
| Chloride  | 64.5          | 250          | 307       | 97      | 310        | 98       | 90-110 | 1    | 20        | mg/kg | 03.31.20 10:54 |      |

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



**Work Order No:**

157375

www.xenco.com Page \_\_\_\_\_ of \_\_\_\_\_

|                  |                        |                         |                                                             |
|------------------|------------------------|-------------------------|-------------------------------------------------------------|
| Project Manager: | Tacomoma Morrissey     | Bill to: (if different) |                                                             |
| Company Name:    | LT Environmental, Inc. | Company Name:           |                                                             |
| Address:         | 3300 North A Street    | Address:                |                                                             |
| City, State ZIP: | Midland, TX 79705      | City, State ZIP:        |                                                             |
| Phone:           | 432.704.5178           | Email:                  | tmorrissey@ltenv.com, cwhaley@ltenv.com, rrudolph@ltenv.com |

|                                             |  |  |  |
|---------------------------------------------|--|--|--|
| <p>Project Name: <b>EMSL I/MCWI 272</b></p> |  |  |  |
|---------------------------------------------|--|--|--|

|                                                                                                                                                                                                                                                         |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| <p>www.xel100.com Page <b>1</b> of <b>1</b></p>                                                                                                                                                                                                         |  |  |  |
| <p align="center"><b>Work Order Comments</b></p>                                                                                                                                                                                                        |  |  |  |
| <p><b>Program:</b> <b>UST/PST</b>   <input type="checkbox"/> <b>RP</b>   <input type="checkbox"/> <b>Lowfields</b>   <input checked="" type="checkbox"/> <b>Reb</b>   <input checked="" type="checkbox"/> <b>Berfund</b>   <input type="checkbox"/></p> |  |  |  |
| <p><b>State of Project:</b></p>                                                                                                                                                                                                                         |  |  |  |
| <p>Reporting: Level II   <input type="checkbox"/> Level III   <input type="checkbox"/> T/UST   <input type="checkbox"/> P   <input type="checkbox"/> L   <input type="checkbox"/> B   <input type="checkbox"/> IV   <input type="checkbox"/></p>        |  |  |  |
| <p>Deliverables: EDD   <input type="checkbox"/>   ADAPT   <input type="checkbox"/>   Other: _____</p>                                                                                                                                                   |  |  |  |

[illegible]

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                      |                                 |          |       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------|----------|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|------|----|----|----|----|---|---|----|
| <b>Total 200.7 / 6010</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>200.8 / 6020:</b> | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      | TC1P / 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 reimbursement of samples constitutes a valid purchase order from client company to Xenoco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenoco 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 Xenoco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenoco, but not analyzed. These terms will be enforced unless previously negotiated. |                      | 1631 / 245.1 / 7470 / 7471 : Hg |          |       |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |      |    |    |    |    |   |   |    |

Revised Date 051418 Rev. 2018.1

## XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03.30.2020 04.42.00 PM

Work Order #: 657325

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R9

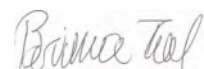
| Sample Receipt Checklist                                | Comments |
|---------------------------------------------------------|----------|
| #1 *Temperature of cooler(s)?                           | 9.8      |
| #2 *Shipping container in good condition?               | Yes      |
| #3 *Samples received 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#:

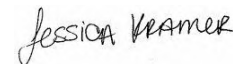
Checklist completed by:



Brianna Teel

Date: 03.30.2020

Checklist reviewed by:



Jessica Kramer

Date: 03.31.2020