

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	NDHR1917160774
District RP	1RP-5562
Facility ID	
Application ID	pDHR1917160479

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)
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.583525 Longitude -103.326422
(NAD 83 in decimal degrees to 5 decimal places)

Site Name EMSU B #865	Site Type Production injection well riser
Date Release Discovered 5/28/2019	API# (if applicable) 30-025-04216

Unit Letter	Section	Township	Range	County
N	11	20S	36E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Klein Ranch)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 0.09	Volume Recovered (bbls) 0
☒ Produced Water	Volume Released (bbls) 33.39	Volume Recovered (bbls) 5
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

After having been shut in due to facility work, the well and injection line were returned to service. A valve on the injection line riser failed due to age and fatigue and fluids were released to the riser pad, lease road, and pasture soils. A vacuum truck recovered free fluids. Additional third party resources have been retained to assist with remediation.

Oil Conservation Division

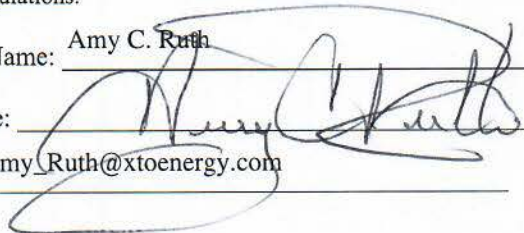
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume of 25 barrels or more
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice provided by Amy Ruth to EMNRD-OCD-District1 spills (NMOCD) on 5/28/2019.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 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>Amy C. Ruth</u> Signature:  email: <u>Amy_Ruth@xtoenergy.com</u>	Title: <u>SH&E Coordinator</u> Date: <u>6/7/2019</u> Telephone: <u>575-689-3380</u>
<u>OCD Only</u> Received by: <u>Dylan Rose-Coss</u> Date: <u>06/20/2019</u>	

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

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

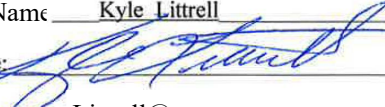
Characterization Report Checklist: Each of the following items must be included in the report.

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

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

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

Printed Name Kyle Littrell Title: SH&E Supervisor
Signature:  Date: 10/27/20
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: [Signature]

Date: 10/27/20

email: Kyle_Littrell@xtoenergy.com

Telephone: _____

OCD Only

Received by: Cristina Eads

Date: 11/20/2020

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: [Signature] Date: 02/03/2021

Printed Name: Cristina Eads

Title: Environmental Specialist



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

October 27, 2020

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

**RE: Variance Request
EMSU B #865
Remediation Permit Number 1RP-5562
Incident Number NDHR1917160774
Lea County, New Mexico**

To Whom It May Concern:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Variance Request, detailing remediation activities completed to address impacted soil at the EMSU B #865 (Site) resulting from a release of produced water and crude oil. The Site is located in Unit N, Section 11, Township 20 South, Range 36 East, in Lea County, New Mexico.

On March 25, 2020, LTE submitted a Remediation Work Plan (Work Plan) to the New Mexico Oil Conservation Division (NMOCD) to conduct further delineation and excavation and to install a 20-mil impermeable liner in the subsurface designed to address remaining chloride impacts to soil. Approval of this Work Plan was received from the NMOCD on May 1, 2020. The following Variance Request summarizes implementation of the final remedial activities as outlined in the Work Plan. Based on field screening activities, soil sample laboratory analytical results, and completion of remediation activities as outlined in the approved Work Plan, XTO is submitting this Variance Request and requesting no further action (NFA) for Remediation Permit (RP) Number 1RP-5562 and Incident Number NDHR1917160774.

RELEASE BACKGROUND

On May 28, 2019, a valve on the injection line riser failed due to age and fatigue causing a release of approximately 33.39 barrels (bbls) of produced water and 0.09 bbls of crude oil. The release occurred on the riser pad located on private land and flowed southeast along the lease road, covering approximately 6,706 square feet. A hydro-vacuum truck was dispatched to the Site to recover free fluids; approximately 5 bbls of produced water were recovered. XTO reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 7, 2019 and was subsequently assigned RP Number 1RP-5562 and Incident Number NDHR1917160774.



As documented in the approved Work Plan, 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): 100 mg/kg
- Chloride: 600 mg/kg

XTO responded to the release by excavating impacted soil to depths ranging from 4.5 feet below ground surface (bgs) to 8.5 feet bgs. The excavation measured approximately 2,775 square feet and approximately 527 cubic yards of impacted soil were removed from the Site. Delineation borings were installed and based on laboratory analytical results vertical delineation and lateral delineation to the south and west were achieved. Following delineation and excavation activities, LTE submitted the Work Plan detailing the remediation work completed and outlining additional proposed work to address residual chloride impacts in the subsurface and finalize delineation to the north and east of the release extent. The Work Plan proposed additional borehole locations to finalize full lateral delineation of the release to the northeast, excavation of additional soil near 4 feet to 5 feet bgs and lateral extension of the south-central portion of the excavation, and installation of a liner to address chloride impacted soil at depths greater than 4 feet bgs. The following sections describe the remediation activities completed at the Site in order to fulfill the scope of work outlined in the approved Work Plan.

DELINEATION ACTIVITIES

On August 4 and August 5, 2020, LTE personnel oversaw the advancement of four additional boreholes (BH13 through BH16), in order to complete lateral delineation to the northeast of the impacted soil. Boreholes BH13 through BH16 were advanced with a truck-mounted hollow stem auger drill rig to a maximum depth of 32 feet bgs. Soil field screened from BH13 indicated elevated chloride concentrations in the subsurface below 4 feet bgs. LTE personnel then advanced BH14 further north to provide lateral delineation to the north. The soil borings were logged by an LTE geologist who inspected the soil for the presence or absence of petroleum hydrocarbon odor and staining. The samples were characterized by visually inspecting the soil samples and field screening the soil headspace using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips to monitor for the presence of volatile organic vapors and chloride concentrations, respectively. Field screening results and observations for the boreholes were recorded on a lithologic/soil sampling logs, which are included in Attachment 1. Eight soil samples from each soil boring were submitted for laboratory analysis: the most impacted sample based on field screening techniques from the borings within the release extent and the terminus of the borehole. The borings were plugged with hydrated bentonite upon completion. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco



in Carlsbad, New Mexico. The borehole locations are depicted to the northeast the original excavation extent on Figure 1.

Laboratory analytical results for the soil samples collected from boreholes BH14 through BH16 indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for the soil samples collected at depths of 15 feet and 17 feet bgs from borehole BH13 indicated that chloride concentrations exceeded the Closure Criteria. The laboratory analytical results are summarized in Table 1, and the complete laboratory analytical reports are included in Attachment 2.

Based on the laboratory analytical results for delineation soil samples collected from boreholes BH14 through BH16 the lateral extent of impacted soil was successfully defined to the north and east. These samples, combined with samples from the boreholes previously completed and detailed in the Work Plan, provide full vertical and lateral delineation of the release.

EXCAVATION ACTIVITIES AND LINER INSTALLATION

Between August 24, 2020 and September 4, 2020, LTE personnel were at the Site to oversee excavation of additional soil and liner installation activities as outlined in the approved Work Plan. The proposed excavation extent was extended to include the area around borehole BH13 to a depth of 4 feet bgs. Similarly, the proposed liner extent was extended to include the soil beneath BH13.

Following removal of soil in the top 4 feet, LTE collected 5-point composite soil samples at a frequency of every 200 square feet from the sidewalls and floor of the excavation. LTE personnel collected thirty-two floor samples, FS01 through FS32, at depths up to 5 feet bgs, and seventeen sidewall samples, SW01 through SW17, at depths ranging from the ground surface to 4 feet or 5 feet bgs. The excavation soil sample locations are presented on Figure 2. The excavation soil samples were collected, handled, and analyzed as previously described and submitted to Xenco in Carlsbad, New Mexico.

Laboratory analytical results indicated that TPH concentrations exceeded the Closure Criteria in confirmation floor soil sample FS21 at a concentration of 133 mg/kg. Laboratory analytical results indicated benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all other excavation floor and sidewall samples. A fresh sample was collected from the same area as FS21 after scratching away the exposed soil on August 31, 2020, and laboratory analytical results indicated TPH concentrations were compliant with Closure Criteria. Laboratory analytical results are summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

Following completion of the excavation and a review of the laboratory analytical results, LTE installed a 20-mil impermeable liner in the excavation to mitigate deeper chloride impacts by restricting vertical migration of chloride through infiltration. The liner encompassed the areas

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where chloride impacted soil was identified below 4 feet bgs. The liner was installed at approximately 4 feet bgs and backfilled with non-waste containing soil or caliche, depending on the location. The liner extent is also depicted on Figure 2.

After completion of the backfill, disturbed pasture areas were reseeded with an approved Bureau of Land Management (BLM) seed mix. Photo documentation was conducted during reseeding activities and a photographic log is included in Attachment 3.

VARIANCE REQUEST

Based on the additional delineation, excavation of the entirety of the top 4 feet of impacted soil, then subsequent installation of an impermeable liner to address elevated chloride below 4 feet in the subsurface, XTO has completed the remediation activities outlined in the approved Work Plan that are equally protective of public health, the environment, and groundwater. As such XTO is respectfully requesting NFA and Closure of RP Number 1RP-5562 (Incident Number NDHR1917160774).

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

Sincerely,

LT ENVIRONMENTAL, INC.

Tacoma Morrissey
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1 Delineation Soil Sample Locations
Figure 2 Excavation Soil Sample Locations and Liner Installation Location
Table 1 Soil Analytical Results
Attachment 1 Lithologic/Soil Sampling Logs
Attachment 2 Laboratory Analytical Reports

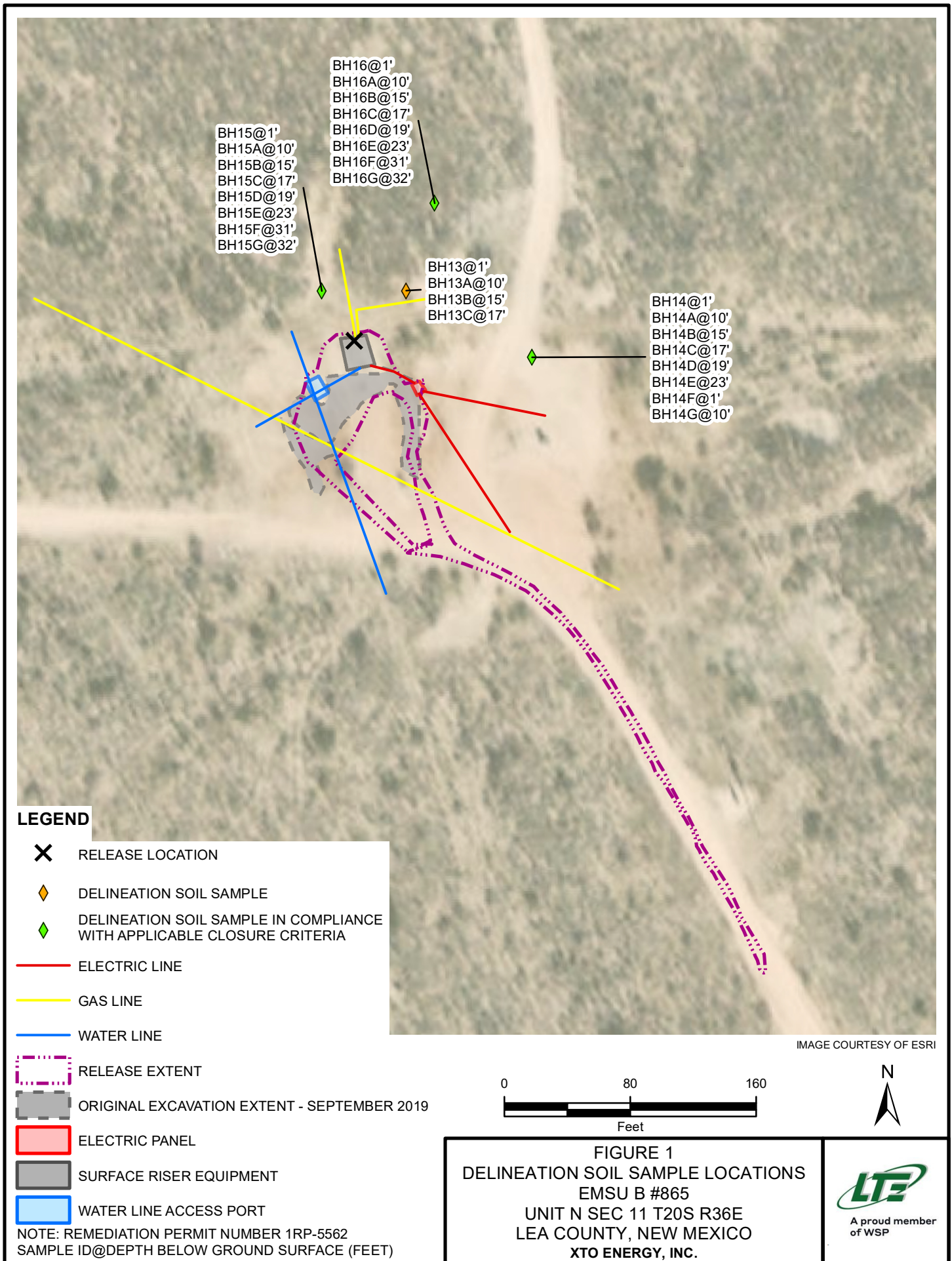


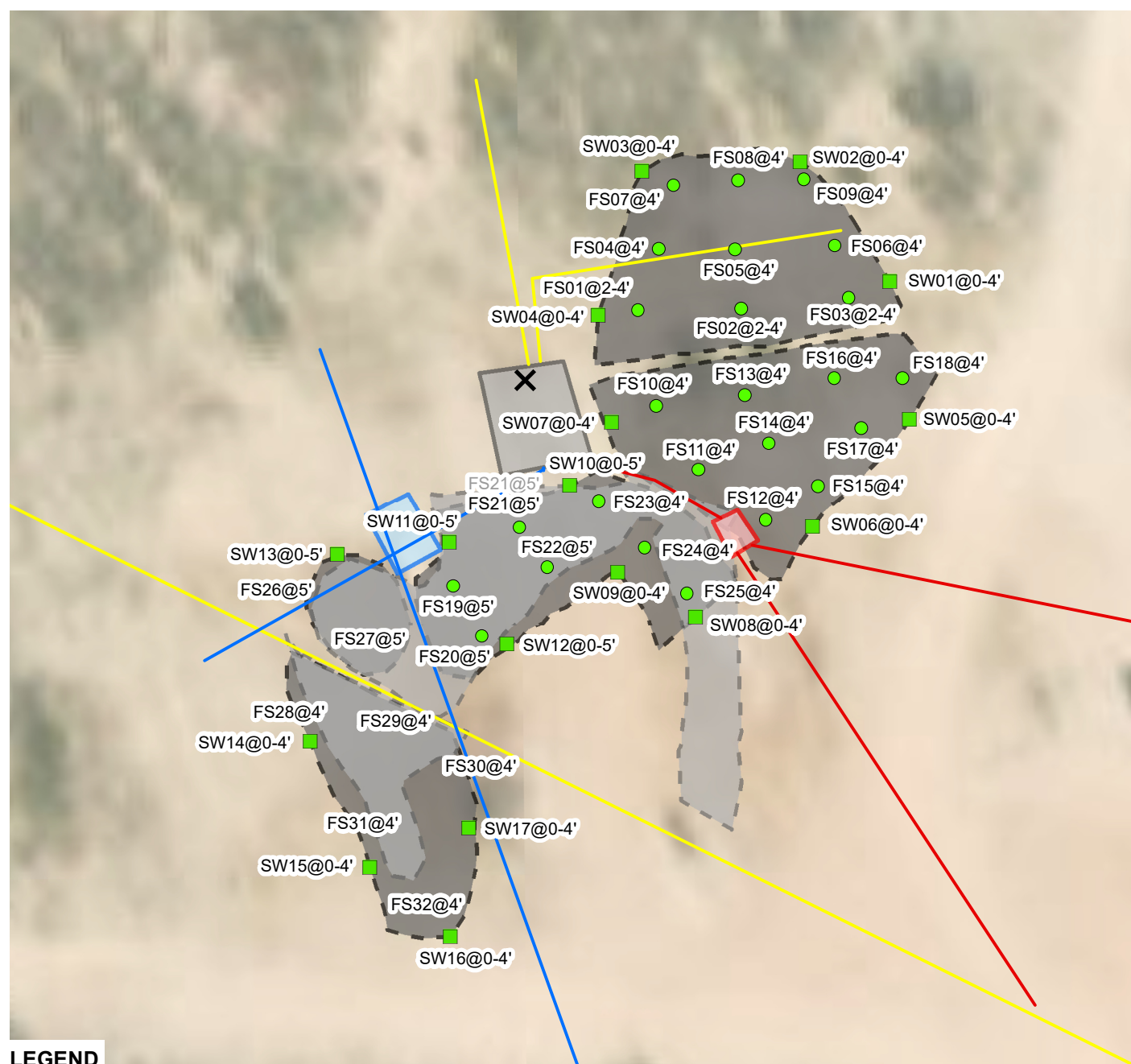
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Attachment 3 Photographic Log

FIGURES





**LEGEND**

- | | | | |
|----------|--|--|-------------------------|
| X | RELEASE LOCATION | | ELECTRIC PANEL |
| | FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA | | SURFACE RISER EQUIPMENT |
| | SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA | | WATER LINE ACCESS PORT |

— ELECTRIC LINE

— GAS LINE

— WATER LINE

CURRENT EXCAVATION EXTENT AND LINER EXTENT - SEPTEMBER 2020

ORIGINAL EXCAVATION EXTENT - SEPTEMBER 2019

NOTE: REMEDIATION PERMIT NUMBER 1RP-5562
SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)

TEXT: INDICATES SOIL REPRESENTED BY SAMPLE THAT WAS REMOVED

IMAGE COURTESY OF ESRI

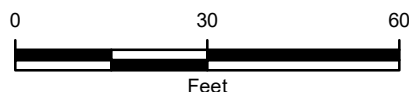


FIGURE 2
EXCAVATION SOIL SAMPLE LOCATIONS
EMSU B #865
UNIT N SEC 11 T20S R36E
LEA COUNTY, NEW MEXICO
XTO ENERGY, INC.



TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

EMSU B #865
REMEDIATION PERMIT NUMBER 1RP-5562 / INCIDENT NUMBER NDHR1917160774
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)
NMOCDC Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	NE	100	600
BH13	1	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	<10.0
BH13A	10	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	333
BH13B	15	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,060
BH13C	17	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	983
BH14	1	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	34.7
BH14A	10	08/04/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	14.2
BH14B	15	08/04/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	461
BH14C	17	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	572
BH14D	19	08/04/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	440
BH14E	23	08/04/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	386
BH14F	31	08/04/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	122
BH14G	32	08/04/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	94.3
BH15	1	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	13.4
BH15A	10	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	190
BH15B	15	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	599
BH15C	17	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	465
BH15D	19	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	481
BH15E	23	08/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	402
BH15F	31	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	263
BH15G	32	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	227
BH16	1	08/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	<9.98
BH16A	10	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	116
BH16B	15	08/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	290



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TABLE 1
SOIL ANALYTICAL RESULTS

EMSU B #865
REMEDATION PERMIT NUMBER 1RP-5562 / INCIDENT NUMBER NDHR1917160774
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)
BH16C	17	08/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	234
BH16D	19	08/05/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	251
BH16E	23	08/05/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	238
BH16F	31	08/05/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	101
BH16G	32	08/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	81.7
SW01	0 - 4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	<10.1
SW02	0 - 4	08/25/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	<9.90
SW03	0 - 4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	13.6
SW04	0 - 4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	14.1
SW05	0 - 4	08/26/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	10.8
SW06	0 - 4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	23.7
SW07	0 - 4	08/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	15.2
SW08	0 - 4	08/26/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	452
SW09	0 - 4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	210
SW10	0 - 5	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	380
SW11	0 - 5	08/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	270
SW12	0 - 5	08/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	309
SW13	0 - 5	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	206
SW14	0 - 4	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	249
SW15	0 - 4	08/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	73.4
SW16	0 - 4	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	173
SW17	0 - 4	08/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	36.0
FS01	2 - 4	08/25/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	371
FS02	2 - 4	08/25/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	45.2



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TABLE 1
SOIL ANALYTICAL RESULTS

EMSU B #865
REMEDIATION PERMIT NUMBER 1RP-5562 / INCIDENT NUMBER NDHR1917160774
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)
FS03	2 - 4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	13.1
FS04	4	08/25/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	23.6
FS05	4	08/25/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.2	<50.2	<50.2	<50.2	<50.2	37.4
FS06	4	08/25/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	<9.92
FS07	4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	14.1
FS08	4	08/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	<9.92
FS09	4	08/25/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	<9.94
FS10	4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	232
FS11	4	08/26/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	291
FS12	4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	253
FS13	4	08/26/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	102
FS14	4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	286
FS15	4	08/26/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.8	<49.8	<49.8	<49.8	<49.8	151
FS16	4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	76.9
FS17	4	08/26/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	271
FS18	4	08/26/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	35.2
FS19	5	08/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	178
FS20	5	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	256
FS21	5	08/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	133	<50.3	133	133	174
FS21	5	08/31/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	329
FS22	5	08/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.0	59.4	<50.0	59.4	59.4	368
FS23	4	08/27/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.0	77.7	<50.0	77.7	77.7	369
FS24	4	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	393
FS25	4	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	221



**TABLE 1
SOIL ANALYTICAL RESULTS**

**EMSU B #865
REMEDATION PERMIT NUMBER 1RP-5562 / INCIDENT NUMBER NDHR1917160774
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)
FS26	5	08/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.3	<50.3	<50.3	<50.3	<50.3	193
FS27	5	08/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.9	<49.9	<49.9	<49.9	<49.9	55.3
FS28	4	08/27/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	236
FS29	4	08/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	37.8
FS30	4	08/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	22.3
FS32	4	08/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	245

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

NA- Not Analyzed

TEXT - indicates sample was recollected



ATTACHMENT 1: LITHOLOGIC/SOIL SAMPLE LOGS



 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: BH13		Date: 8/4/2020		
					EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: BB, WM		Method: Hollow Stem Auger		
Lat/Long: 32.583622, -103.326304				Field Screening: Chloride, PID		Hole Diameter: 6.25"		Total Depth: 17'	
Comments: Borehole backfilled with hydrated bentonite chips 0-17'bgs									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks	
M	<124	4.3	N	BH13	0	1'	SP	0' - 5' SAND, moist, brown, poorly graded, fine grain, no stain, no odor, trace roots 2' - 5' roots abscent	
M	<124	0.4	N		5		CCHE	5' - 15' CALICHE, dry, off-white/tan, moderately consolidated, trace light brown sand laminations, no stain, no odor 12' - 15' Some brown-red, fine grain sand pockets	
D	249	0.1	N	BH13A	10	10'			
D	778	0.1	N	BH13B	15	15'	SP-S	15' - 15.5' SANDSTONE, poorly consolidated, brown-red, fine grain, poorly graded, no stain, no odor	
D	711	0	N	BH13C	17	17'	CCHE	16' - 17' CALICHE, dry, off-white/tan, poorly consolidated, trace fine grain poorly graded sand pockets, no stain, no odor	
								Total Depth: 17' bgs	

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH14		Date: 8/4/2020		
				EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: BB, WM		Method: Hollow Stem Auger		
Lat/Long: 32.583503, -103.326046		Field Screening: Chloride, PID		Hole Diameter: 6.25"		Total Depth: 32'		
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<124	0.1	N	BH14	1	1'	CCHE SP	0' - 0.5' CALICHE, dry, stain, off-white/tan, poorly consolidated, no stain, no odor, fill 0.5' - 5' SAND, moist, brown-light brown, poorly graded, fine grain, no stain, no odor
M	<124	0.1	N		5		SP-S	5' - 15' SANDSTONE, moist, light brown-light gray, moderately consolidated, poorly graded, fine grain, no stain, no odor
M	<124	0.1	N	BH14A	10	10'		
D	778	0.1	N	BH14B	15	15'	CCHE	15' - 26' CALICHE, dry, tan/off white, moderately consolidated, trace gypsum veins, no stain, no odor 17' - 19' Some fine grain light brown sand
D	436	0.1	N	BH14C	17	17'		
D	436	0.1	N	BH14D	19	19'		
					25			

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH14	Date: 8/4/2020					
		EMSU B 865	1RP-5562					
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: BB, WM	Method: Hollow Stem Auger					
Lat/Long: 32.583503, -103.326046		Field Screening: Chloride, PID	Hole Diameter: 6.25"					
Total Depth: 32'								
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	308	0.1	N		26		CCHE	
M		2.2	N		30		SM-S	26' - 32' SANDSTONE, moist, brown-light brown, poorly consolidated, fine-very fine, grain, no stain, no odor
M	<124	0.5	N	BH14F	31	31'		31' - 32' Well consolidated
M	<124	1	N	BH14G	32	32'		
								Total Depth: 32' bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: BH15		Date: 8/5/2020		
					EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: BB, WM		Method: Hollow Stem Auger		
Lat/Long: 32.583623, -103.326479				Field Screening: Chloride, PID		Hole Diameter: 6.25"		Total Depth: 32'	
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks	
M	<124	0	N	BH15	1	1'	SP	0' - 4' SAND, moist, brown-light brown, poorly graded, fine grain, some roots, no stain, no odor 2' - 4' Roots absent	
M	308	0.1	N		4	4'	CCHE	4' - 9' CALICHE, moist, tan/off white, moderately consolidated, trace fine grain brown sand, no stain, no odor	
					5				
					9				
D	<124	0	N	BH15A	10	10'	SP-S	9' - 10' SANDSTONE, moist, brown-lightbrown, moderately consolidated, poorly graded, fine grain, no stain, no odor	
							CCHE	10' - 32' CALICHE, dry, off white/tan, moderately consolidated, trace fine grain sand pockets, no stain, no odor	
D		0	N		12			13' - 15' Moist	
								17' - 22' Some brown fine grain sand pockets	
M	487	0.2	N	BH15B	15	15'			
D	392		N	BH15C	17	17'			
D	436	0.2	N	BH15D	19	19'			
D	392	0	N	BH15E	23	23'			
					25				

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH15		Date: 8/5/2020		
				EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG								
Lat/Long: 32.583623, -103.326479				Field Screening: Chloride, PID		Hole Diameter: 6.25"		
Total Depth: 32'								
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
D	274	0	N		26		CCHE	26' - 31' Some brown fine grain sand pockets
					27			
M		0	N		29			
M	235	0	N	BH15F	31	31'		
M	207	0	N	BH15G	32	32'		Total Depth: 32' bgs

 LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation					Identifier: BH16		Date: 8/5/2020		
					EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG					Logged By: BB, WM		Method: Hollow Stem Auger		
Lat/Long: 32.583775, -103.326244				Field Screening: Chloride, PID		Hole Diameter: 6.25"		Total Depth: 32'	
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.									
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks	
M	<124	0.1	N	BH16	1	1'	SP	0' - 4' SAND, moist, brown, poorly graded, fine grain, some roots, no stain, no odor 2' - 4' Roots absent	
M	<124	0.1	N		4	4'	SP-S	4' - 9' SANDSTONE, moist, light brown - light gray, poorly graded, fine grain, poorly consolidated, no stain, no odor	
D	207	0.1	N	BH16A	9	10'	CCHE	9' - 14' CALICHE, dry, off white/tan, moderately consolidated, trace light brown sand pockets, trace roots, no stain, no odor	
D		0.2	N		10				
M	274	0.2	N	BH16B	12	14'	SP-S	14' - 32' SANDSTONE, moist, brown/red, moderately consolidated, poorly graded, fine grain, trace caliche, no stain, no odor	
M	235	0.1	N	BH16C	14	15'		18' - 18.5' Off white caliche stringer	
M	235	0.1	N	BH16D	15	17'		21' - 27' Some tan/off white caliche	
M		0.1	N		17	19'			
M	235	0.1	N	BH16E	19	21'			
					21	23'			
					23				
					25				

		LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: BH16		Date: 8/5/2020		
				EMSU B 865		1RP-5562		
LITHOLOGIC / SOIL SAMPLING LOG				Logged By: BB, WM		Method: Hollow Stem Auger		
Lat/Long: 32.583775, -103.326244		Field Screening: Chloride, PID		Hole Diameter: 6.25"		Total Depth: 32'		
Comments: Borehole backfilled with clean drill cuttings since all field screenings were clean.								
Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
M	<124	0.1	N		26		SP-S	31' - 32' Some off white caliche
					27			
M		0.1	N		29			
M	<124	0.1	N	BH16F	31	31'		
D	<124	0.1	N	BH16G	32	32'		
								Total Depth: 32' bgs

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS



Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669401-001	669401-002	669401-003	669401-004	669401-005	669401-006
	Field Id:	BH13	BH13 A	BH13 B	BH13 C	BH14	BH14 A
	Depth:	1- ft	10- ft	15- ft	17- ft	1- ft	10- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.04.2020 10:40	08.04.2020 10:48	08.04.2020 11:50	08.04.2020 12:05	08.04.2020 13:35	08.04.2020 14:10
Chloride by EPA 300	Extracted:	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30
	Analyzed:	08.06.2020 18:45	08.06.2020 18:51	08.06.2020 19:08	08.06.2020 19:13	08.06.2020 19:19	08.06.2020 19:24
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<10.0 10.0	333 9.94	1060 50.1	983 50.1	34.7 9.98	14.2 9.98

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669401-001	669401-002	669401-003	669401-004	669401-005	669401-006
	Field Id:	BH13	BH13 A	BH13 B	BH13 C	BH14	BH14 A
	Depth:	1- ft	10- ft	15- ft	17- ft	1- ft	10- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.04.2020 10:40	08.04.2020 10:48	08.04.2020 11:50	08.04.2020 12:05	08.04.2020 13:35	08.04.2020 14:10
BTEX by EPA 8021B	Extracted:	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47
	Analyzed:	08.06.2020 19:39	08.06.2020 22:49	08.06.2020 23:11	08.06.2020 23:34	08.06.2020 23:56	08.07.2020 00:19
	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	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
	Toluene	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
m,p-Xylenes		<0.00401 0.00401	<0.00402 0.00402	<0.00401 0.00401	<0.00400 0.00400	<0.00399 0.00399	<0.00404 0.00404
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202
TPH by SW8015 Mod	Extracted:	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00
	Analyzed:	08.06.2020 17:24	08.06.2020 17:44	08.06.2020 18:04	08.06.2020 18:24	08.06.2020 18:44	08.06.2020 19:04
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2
	Diesel Range Organics (DRO)	<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2
Total TPH		<50.2 50.2	<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<50.2 50.2

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Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669401-007	669401-008	669401-009	669401-010	669401-011	669401-012
	Field Id:	BH14 B	BH14 C	BH14 D	BH14 E	BH14 F	BH14 G
	Depth:	15- ft	17- ft	19- ft	23- ft	31- ft	32- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.04.2020 14:35	08.04.2020 14:45	08.04.2020 15:00	08.04.2020 15:20	08.04.2020 16:10	08.04.2020 16:15
Chloride by EPA 300	Extracted:	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30
	Analyzed:	08.06.2020 19:30	08.06.2020 19:35	08.06.2020 19:52	08.06.2020 19:58	08.06.2020 20:15	08.06.2020 20:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		461 49.6	572 9.94	440 10.1	386 9.98	122 9.88	94.3 9.94

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Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669401-007	669401-008	669401-009	669401-010	669401-011	669401-012
	Field Id:	BH14 B	BH14 C	BH14 D	BH14 E	BH14 F	BH14 G
	Depth:	15- ft	17- ft	19- ft	23- ft	31- ft	32- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.04.2020 14:35	08.04.2020 14:45	08.04.2020 15:00	08.04.2020 15:20	08.04.2020 16:10	08.04.2020 16:15
BTEX by EPA 8021B	Extracted:	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47
	Analyzed:	08.07.2020 00:41	08.07.2020 01:59	08.07.2020 02:21	08.07.2020 02:44	08.07.2020 03:06	08.07.2020 03:29
	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	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
	Toluene	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402	<0.00396 0.00396	<0.00398 0.00398	<0.00397 0.00397	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199	<0.00198 0.00198	<0.00201 0.00201
TPH by SW8015 Mod	Extracted:	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00
	Analyzed:	08.06.2020 19:24	08.06.2020 20:05	08.06.2020 20:25	08.06.2020 20:45	08.06.2020 21:06	08.06.2020 21:26
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons (GRO)	<49.8 49.8	<49.9 49.9	<50.2 50.2	<49.9 49.9	<49.8 49.8	<49.9 49.9
	Diesel Range Organics (DRO)	<49.8 49.8	<49.9 49.9	<50.2 50.2	<49.9 49.9	<49.8 49.8	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<49.9 49.9	<50.2 50.2	<49.9 49.9	<49.8 49.8	<49.9 49.9
Total GRO-DRO		<49.8 49.8	<49.9 49.9	<50.2 50.2	<49.9 49.9	<49.8 49.8	<49.9 49.9
Total TPH		<49.8 49.8	<49.9 49.9	<50.2 50.2	<49.9 49.9	<49.8 49.8	<49.9 49.9

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Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669401-013	669401-014	669401-015	669401-016	669401-017	669401-018
	Field Id:	BH15	BH15 A	BH15 B	BH15 C	BH15 D	BH15 E
	Depth:	1- ft	10- ft	15- ft	17- ft	19- ft	23- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.05.2020 08:50	08.05.2020 09:05	08.05.2020 09:30	08.05.2020 09:40	08.05.2020 09:50	08.05.2020 10:10
Chloride by EPA 300	Extracted:	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 16:30	08.06.2020 17:00
	Analyzed:	08.06.2020 20:26	08.06.2020 20:31	08.06.2020 20:37	08.06.2020 20:42	08.06.2020 20:48	08.06.2020 21:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		13.4 9.98	190 9.96	599 D 50.1	465 49.6	481 9.94	402 9.94

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Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669401-013	669401-014	669401-015	669401-016	669401-017	669401-018
	<i>Field Id:</i>	BH15	BH15 A	BH15 B	BH15 C	BH15 D	BH15 E
	<i>Depth:</i>	1- ft	10- ft	15- ft	17- ft	19- ft	23- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.05.2020 08:50	08.05.2020 09:05	08.05.2020 09:30	08.05.2020 09:40	08.05.2020 09:50	08.05.2020 10:10
BTEX by EPA 8021B	<i>Extracted:</i>	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:47	08.06.2020 16:55
	<i>Analyzed:</i>	08.07.2020 03:51	08.07.2020 04:14	08.07.2020 04:36	08.07.2020 04:58	08.07.2020 05:21	08.06.2020 20:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00401 0.00401	<0.00401 0.00401	<0.00399 0.00399	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
TPH by SW8015 Mod	<i>Extracted:</i>	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:15
	<i>Analyzed:</i>	08.06.2020 21:46	08.06.2020 22:06	08.06.2020 22:27	08.06.2020 22:47	08.06.2020 23:07	08.06.2020 19:24
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.2 50.2	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.2 50.2	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.2 50.2	<49.9 49.9
Total GRO-DRO		<50.0 50.0	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.2 50.2	<49.9 49.9
Total TPH		<50.0 50.0	<50.3 50.3	<50.2 50.2	<49.8 49.8	<50.2 50.2	<49.9 49.9

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Certificate of Analysis Summary 669401

LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
Report Date: 08.14.2020 12:45
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669401-019	669401-020	669401-021	669401-022	669401-023	669401-024
	<i>Field Id:</i>	BH15 F	BH15 G	BH16	BH16 A	BH16 B	BH16 C
	<i>Depth:</i>	31- ft	32- ft	1- ft	10- ft	15- ft	17- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.05.2020 10:55	08.05.2020 11:15	08.05.2020 12:05	08.05.2020 12:25	08.05.2020 12:35	08.05.2020 13:05
BTEX by EPA 8021B	<i>Extracted:</i>	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55
	<i>Analyzed:</i>	08.06.2020 20:37	08.06.2020 20:58	08.06.2020 21:18	08.06.2020 21:38	08.06.2020 21:59	08.06.2020 22:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00
	<i>Analyzed:</i>	08.06.2020 21:38	08.06.2020 21:44	08.06.2020 21:49	08.06.2020 21:55	08.06.2020 22:12	08.06.2020 22:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		263 10.1	227 10.1	<9.98 9.98	116 9.94	290 9.96	234 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15
	<i>Analyzed:</i>	08.06.2020 20:25	08.06.2020 20:45	08.06.2020 21:06	08.06.2020 21:26	08.06.2020 21:46	08.06.2020 22:06
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8
Total GRO-DRO		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8
Total TPH		<49.8 49.8	<50.0 50.0	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8

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Jessica Kramer

Certificate of Analysis Summary 669401



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 0121905
 Contact: Dan Moir
 Project Location:

Date Received in Lab: Thu 08.06.2020 13:09
 Report Date: 08.14.2020 12:45
 Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669401-025	669401-026	669401-027	669401-028		
	<i>Field Id:</i>	BH16 D	BH16 E	BH16 F	BH16 G		
	<i>Depth:</i>	19- ft	23- ft	31- ft	32- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	08.05.2020 13:10	08.05.2020 13:30	08.05.2020 14:40	08.05.2020 14:45		
BTEX by EPA 8021B	<i>Extracted:</i>	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55	08.06.2020 16:55		
	<i>Analyzed:</i>	08.06.2020 22:39	08.06.2020 23:55	08.07.2020 00:16	08.07.2020 00:36		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
m,p-Xylenes		<0.00403 0.00403	<0.00403 0.00403	<0.00403 0.00403	<0.00398 0.00398		
o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
Total Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
Total BTEX		<0.00202 0.00202	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199		
Chloride by EPA 300	<i>Extracted:</i>	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00	08.06.2020 17:00		
	<i>Analyzed:</i>	08.06.2020 22:23	08.06.2020 22:28	08.06.2020 22:34	08.06.2020 22:40		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		251 10.0	238 10.1	101 10.0	81.7 9.94		
TPH by SW8015 Mod	<i>Extracted:</i>	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15	08.06.2020 17:15		
	<i>Analyzed:</i>	08.06.2020 22:27	08.06.2020 22:47	08.06.2020 23:07	08.06.2020 23:48		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8		
Diesel Range Organics (DRO)		<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8		
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8		
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8		
Total TPH		<50.2 50.2	<50.2 50.2	<50.3 50.3	<49.8 49.8		

BRL - Below Reporting Limit

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



Analytical Report 669401

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

0121905

08.14.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.14.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **669401**

EMSU B 865

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 Eurofins Xenco, LLC Report Number(s) 669401. 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 Eurofins Xenco, LLC. 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. 669401 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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



Sample Cross Reference 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH13	S	08.04.2020 10:40	1 ft	669401-001
BH13 A	S	08.04.2020 10:48	10 ft	669401-002
BH13 B	S	08.04.2020 11:50	15 ft	669401-003
BH13 C	S	08.04.2020 12:05	17 ft	669401-004
BH14	S	08.04.2020 13:35	1 ft	669401-005
BH14 A	S	08.04.2020 14:10	10 ft	669401-006
BH14 B	S	08.04.2020 14:35	15 ft	669401-007
BH14 C	S	08.04.2020 14:45	17 ft	669401-008
BH14 D	S	08.04.2020 15:00	19 ft	669401-009
BH14 E	S	08.04.2020 15:20	23 ft	669401-010
BH14 F	S	08.04.2020 16:10	31 ft	669401-011
BH14 G	S	08.04.2020 16:15	32 ft	669401-012
BH15	S	08.05.2020 08:50	1 ft	669401-013
BH15 A	S	08.05.2020 09:05	10 ft	669401-014
BH15 B	S	08.05.2020 09:30	15 ft	669401-015
BH15 C	S	08.05.2020 09:40	17 ft	669401-016
BH15 D	S	08.05.2020 09:50	19 ft	669401-017
BH15 E	S	08.05.2020 10:10	23 ft	669401-018
BH15 F	S	08.05.2020 10:55	31 ft	669401-019
BH15 G	S	08.05.2020 11:15	32 ft	669401-020
BH16	S	08.05.2020 12:05	1 ft	669401-021
BH16 A	S	08.05.2020 12:25	10 ft	669401-022
BH16 B	S	08.05.2020 12:35	15 ft	669401-023
BH16 C	S	08.05.2020 13:05	17 ft	669401-024
BH16 D	S	08.05.2020 13:10	19 ft	669401-025
BH16 E	S	08.05.2020 13:30	23 ft	669401-026
BH16 F	S	08.05.2020 14:40	31 ft	669401-027
BH16 G	S	08.05.2020 14:45	32 ft	669401-028



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 0121905
Work Order Number(s): 669401

Report Date: 08.14.2020
Date Received: 08.06.2020

Sample receipt non conformances and comments:

V1.001 Revision (client email) Corrected typo on sample names.

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-001 Date Collected: 08.04.2020 10:40 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	08.06.2020 18:45	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 17:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 17:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 17:24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 17:24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 17:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.06.2020 17:24	
o-Terphenyl	84-15-1	106	%	70-135	08.06.2020 17:24	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13**
Lab Sample Id: 669401-001

Matrix: Soil
Date Collected: 08.04.2020 10:40

Date Received: 08.06.2020 13:09
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.06.2020 19:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 19:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	08.06.2020 19:39	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.06.2020 19:39	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 A** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-002 Date Collected: 08.04.2020 10:48 Sample Depth: 10 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	333	9.94	mg/kg	08.06.2020 18:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 17:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 17:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 17:44	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 17:44	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 17:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.06.2020 17:44	
o-Terphenyl	84-15-1	106	%	70-135	08.06.2020 17:44	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 A**
Lab Sample Id: 669401-002

Matrix: Soil
Date Collected: 08.04.2020 10:48

Date Received: 08.06.2020 13:09
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.06.2020 22:49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.06.2020 22:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.06.2020 22:49		
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.06.2020 22:49		



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 B** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-003 Date Collected: 08.04.2020 11:50 Sample Depth: 15 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	50.1	mg/kg	08.06.2020 19:08		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.06.2020 18:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.06.2020 18:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.06.2020 18:04	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.06.2020 18:04	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.06.2020 18:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.06.2020 18:04	
o-Terphenyl	84-15-1	102	%	70-135	08.06.2020 18:04	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 B**
Lab Sample Id: 669401-003

Matrix: Soil
Date Collected: 08.04.2020 11:50

Date Received: 08.06.2020 13:09
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.06.2020 23:11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 23:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.06.2020 23:11	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.06.2020 23:11	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 C** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-004 Date Collected: 08.04.2020 12:05 Sample Depth: 17 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	983	50.1	mg/kg	08.06.2020 19:13		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 18:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 18:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 18:24	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 18:24	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 18:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.06.2020 18:24	
o-Terphenyl	84-15-1	99	%	70-135	08.06.2020 18:24	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH13 C**
Lab Sample Id: 669401-004

Matrix: Soil
Date Collected: 08.04.2020 12:05

Date Received: 08.06.2020 13:09
Sample Depth: 17 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.06.2020 23:34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 23:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.06.2020 23:34	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.06.2020 23:34	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-005 Date Collected: 08.04.2020 13:35 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.7	9.98	mg/kg	08.06.2020 19:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 18:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 18:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 18:44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 18:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 18:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.06.2020 18:44	
o-Terphenyl	84-15-1	98	%	70-135	08.06.2020 18:44	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14**
Lab Sample Id: 669401-005

Matrix: Soil
Date Collected: 08.04.2020 13:35

Date Received: 08.06.2020 13:09
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.06.2020 23:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 23:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.06.2020 23:56		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.06.2020 23:56		



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 A** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-006 Date Collected: 08.04.2020 14:10 Sample Depth: 10 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.2	9.98	mg/kg	08.06.2020 19:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 19:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 19:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 19:04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 19:04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 19:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.06.2020 19:04	
o-Terphenyl	84-15-1	94	%	70-135	08.06.2020 19:04	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 A**
Lab Sample Id: 669401-006

Matrix: Soil
Date Collected: 08.04.2020 14:10

Date Received: 08.06.2020 13:09
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.07.2020 00:19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.2020 00:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 00:19	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.2020 00:19	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 B** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-007 Date Collected: 08.04.2020 14:35 Sample Depth: 15 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	461	49.6	mg/kg	08.06.2020 19:30		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 19:24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 19:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 19:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.06.2020 19:24	
o-Terphenyl	84-15-1	96	%	70-135	08.06.2020 19:24	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 B**
Lab Sample Id: 669401-007

Matrix: Soil
Date Collected: 08.04.2020 14:35

Date Received: 08.06.2020 13:09
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 00:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 00:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.07.2020 00:41		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 00:41		



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 C** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-008 Date Collected: 08.04.2020 14:45 Sample Depth: 17 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	572	9.94	mg/kg	08.06.2020 19:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.06.2020 20:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 20:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 20:05	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.06.2020 20:05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 20:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.06.2020 20:05	
o-Terphenyl	84-15-1	97	%	70-135	08.06.2020 20:05	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 C**
Lab Sample Id: 669401-008

Matrix: Soil
Date Collected: 08.04.2020 14:45

Date Received: 08.06.2020 13:09
Sample Depth: 17 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 01:59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 01:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.07.2020 01:59	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.07.2020 01:59	



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EMSU B 865

Sample Id: **BH14 D** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-009 Date Collected: 08.04.2020 15:00 Sample Depth: 19 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	440	10.1	mg/kg	08.06.2020 19:52		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 20:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 20:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 20:25	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 20:25	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 20:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.06.2020 20:25	
o-Terphenyl	84-15-1	109	%	70-135	08.06.2020 20:25	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 D**
Lab Sample Id: 669401-009

Matrix: Soil
Date Collected: 08.04.2020 15:00

Date Received: 08.06.2020 13:09
Sample Depth: 19 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.2020 02:21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 02:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 02:21	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.07.2020 02:21	



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EMSU B 865

Sample Id: **BH14 E** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-010 Date Collected: 08.04.2020 15:20 Sample Depth: 23 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	386	9.98	mg/kg	08.06.2020 19:58		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.06.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 20:45	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.06.2020 20:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.06.2020 20:45	
o-Terphenyl	84-15-1	101	%	70-135	08.06.2020 20:45	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 E**
Lab Sample Id: 669401-010

Matrix: Soil
Date Collected: 08.04.2020 15:20

Date Received: 08.06.2020 13:09
Sample Depth: 23 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3133863

Prep Method: SW5035A

% Moisture:

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 02:44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 02:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 02:44		
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.07.2020 02:44		



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EMSU B 865

Sample Id: **BH14 F** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-011 Date Collected: 08.04.2020 16:10 Sample Depth: 31 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	122	9.88	mg/kg	08.06.2020 20:15		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 21:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 21:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 21:06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 21:06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 21:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.06.2020 21:06	
o-Terphenyl	84-15-1	96	%	70-135	08.06.2020 21:06	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 F**
Lab Sample Id: 669401-011

Matrix: Soil
Date Collected: 08.04.2020 16:10

Date Received: 08.06.2020 13:09
Sample Depth: 31 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.2020 03:06	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 03:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.07.2020 03:06	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.2020 03:06	



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EMSU B 865

Sample Id: **BH14 G** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-012 Date Collected: 08.04.2020 16:15 Sample Depth: 32 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	94.3	9.94	mg/kg	08.06.2020 20:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.06.2020 21:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 21:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 21:26	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.06.2020 21:26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.06.2020 21:26	
o-Terphenyl	84-15-1	120	%	70-135	08.06.2020 21:26	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH14 G**
Lab Sample Id: 669401-012

Matrix: Soil
Date Collected: 08.04.2020 16:15

Date Received: 08.06.2020 13:09
Sample Depth: 32 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 03:29	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 03:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.2020 03:29		
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.2020 03:29		



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EMSU B 865

Sample Id: **BH15** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-013 Date Collected: 08.05.2020 08:50 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.4	9.98	mg/kg	08.06.2020 20:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.2020 21:46	
o-Terphenyl	84-15-1	103	%	70-135	08.06.2020 21:46	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15**
Lab Sample Id: 669401-013

Matrix: Soil
Date Collected: 08.05.2020 08:50

Date Received: 08.06.2020 13:09
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.2020 03:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 03:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 03:51		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 03:51		



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15 A** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-014 Date Collected: 08.05.2020 09:05 Sample Depth: 10 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	190	9.96	mg/kg	08.06.2020 20:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.06.2020 22:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.06.2020 22:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.06.2020 22:06	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.06.2020 22:06	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.06.2020 22:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	08.06.2020 22:06	
o-Terphenyl	84-15-1	112	%	70-135	08.06.2020 22:06	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15 A**
Lab Sample Id: 669401-014

Matrix: Soil
Date Collected: 08.05.2020 09:05

Date Received: 08.06.2020 13:09
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 04:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 04:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 04:14		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 04:14		



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EMSU B 865

Sample Id: **BH15 B** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-015 Date Collected: 08.05.2020 09:30 Sample Depth: 15 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	599	50.1	mg/kg	08.11.2020 14:06	D	5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.2020 22:27	
o-Terphenyl	84-15-1	105	%	70-135	08.06.2020 22:27	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15 B**
Lab Sample Id: 669401-015

Matrix: Soil
Date Collected: 08.05.2020 09:30

Date Received: 08.06.2020 13:09
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 04:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 04:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 04:36	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 04:36	



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EMSU B 865

Sample Id: **BH15 C** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-016 Date Collected: 08.05.2020 09:40 Sample Depth: 17 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	465	49.6	mg/kg	08.06.2020 20:42		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 22:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 22:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 22:47	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 22:47	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 22:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.06.2020 22:47	
o-Terphenyl	84-15-1	97	%	70-135	08.06.2020 22:47	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15 C**
Lab Sample Id: 669401-016

Matrix: Soil
Date Collected: 08.05.2020 09:40

Date Received: 08.06.2020 13:09
Sample Depth: 17 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 04:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 04:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.2020 04:58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 04:58	



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EMSU B 865

Sample Id: **BH15 D** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-017 Date Collected: 08.05.2020 09:50 Sample Depth: 19 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 16:30 Basis: Wet Weight
 Seq Number: 3133867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	481	9.94	mg/kg	08.06.2020 20:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133751

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 23:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 23:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 23:07	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 23:07	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 23:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.06.2020 23:07	
o-Terphenyl	84-15-1	112	%	70-135	08.06.2020 23:07	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH15 D**
Lab Sample Id: 669401-017

Matrix: Soil
Date Collected: 08.05.2020 09:50

Date Received: 08.06.2020 13:09
Sample Depth: 19 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.06.2020 16:47

Basis: Wet Weight

Seq Number: 3133863

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 05:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 05:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 05:21	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.07.2020 05:21	



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EMSU B 865

Sample Id: **BH15 E** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-018 Date Collected: 08.05.2020 10:10 Sample Depth: 23 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	402	9.94	mg/kg	08.06.2020 21:21		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.06.2020 19:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 19:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 19:24	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.06.2020 19:24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 19:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.06.2020 19:24	
o-Terphenyl	84-15-1	112	%	70-135	08.06.2020 19:24	



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EMSU B 865

Sample Id: **BH15 E**
Lab Sample Id: 669401-018

Matrix: Soil
Date Collected: 08.05.2020 10:10

Date Received: 08.06.2020 13:09
Sample Depth: 23 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MRB

Seq Number: 3133865

Prep Method: SW5035A

% Moisture:

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.06.2020 20:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.06.2020 20:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.06.2020 20:17		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.06.2020 20:17		



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EMSU B 865

Sample Id: **BH15 F** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-019 Date Collected: 08.05.2020 10:55 Sample Depth: 31 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	263	10.1	mg/kg	08.06.2020 21:38		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 20:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 20:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 20:25	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 20:25	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 20:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	08.06.2020 20:25	
o-Terphenyl	84-15-1	110	%	70-135	08.06.2020 20:25	



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EMSU B 865

Sample Id: **BH15 F**
Lab Sample Id: 669401-019

Matrix: Soil
Date Collected: 08.05.2020 10:55

Date Received: 08.06.2020 13:09
Sample Depth: 31 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.06.2020 20:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 20:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.06.2020 20:37	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.06.2020 20:37	



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EMSU B 865

Sample Id: **BH15 G** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-020 Date Collected: 08.05.2020 11:15 Sample Depth: 32 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	227	10.1	mg/kg	08.06.2020 21:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 20:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 20:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 20:45	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 20:45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.06.2020 20:45	
o-Terphenyl	84-15-1	107	%	70-135	08.06.2020 20:45	



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EMSU B 865

Sample Id: **BH15 G**
Lab Sample Id: 669401-020

Matrix: Soil
Date Collected: 08.05.2020 11:15

Date Received: 08.06.2020 13:09
Sample Depth: 32 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.06.2020 20:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 20:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.06.2020 20:58	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.06.2020 20:58	



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EMSU B 865

Sample Id: **BH16** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-021 Date Collected: 08.05.2020 12:05 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.98	9.98	mg/kg	08.06.2020 21:49	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 21:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 21:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 21:06	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 21:06	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 21:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.06.2020 21:06	
o-Terphenyl	84-15-1	106	%	70-135	08.06.2020 21:06	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16**
Lab Sample Id: 669401-021

Matrix: Soil
Date Collected: 08.05.2020 12:05

Date Received: 08.06.2020 13:09
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.06.2020 21:18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.06.2020 21:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.06.2020 21:18	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.06.2020 21:18	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 A** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-022 Date Collected: 08.05.2020 12:25 Sample Depth: 10 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	9.94	mg/kg	08.06.2020 21:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 21:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 21:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 21:26	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 21:26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	08.06.2020 21:26	
o-Terphenyl	84-15-1	107	%	70-135	08.06.2020 21:26	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 A**
Lab Sample Id: 669401-022

Matrix: Soil
Date Collected: 08.05.2020 12:25

Date Received: 08.06.2020 13:09
Sample Depth: 10 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MRB

Seq Number: 3133865

Prep Method: SW5035A

% Moisture:

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.06.2020 21:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 21:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.06.2020 21:38	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.06.2020 21:38	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 B** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-023 Date Collected: 08.05.2020 12:35 Sample Depth: 15 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	290	9.96	mg/kg	08.06.2020 22:12		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 21:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.06.2020 21:46	
o-Terphenyl	84-15-1	104	%	70-135	08.06.2020 21:46	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 B**
Lab Sample Id: 669401-023

Matrix: Soil
Date Collected: 08.05.2020 12:35

Date Received: 08.06.2020 13:09
Sample Depth: 15 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.06.2020 21:59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.06.2020 21:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.06.2020 21:59	
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.06.2020 21:59	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 C** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-024 Date Collected: 08.05.2020 13:05 Sample Depth: 17 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	234	9.92	mg/kg	08.06.2020 22:17		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 22:06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 22:06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 22:06	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 22:06	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 22:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.06.2020 22:06	
o-Terphenyl	84-15-1	106	%	70-135	08.06.2020 22:06	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 C**
Lab Sample Id: 669401-024

Matrix: Soil
Date Collected: 08.05.2020 13:05

Date Received: 08.06.2020 13:09
Sample Depth: 17 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.06.2020 22:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 22:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.06.2020 22:19	
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.06.2020 22:19	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 D** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-025 Date Collected: 08.05.2020 13:10 Sample Depth: 19 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	251	10.0	mg/kg	08.06.2020 22:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 22:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.06.2020 22:27	
o-Terphenyl	84-15-1	100	%	70-135	08.06.2020 22:27	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 D**
Lab Sample Id: 669401-025

Matrix: Soil
Date Collected: 08.05.2020 13:10

Date Received: 08.06.2020 13:09
Sample Depth: 19 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.06.2020 22:39	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.06.2020 22:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.06.2020 22:39		
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.06.2020 22:39		



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 E** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-026 Date Collected: 08.05.2020 13:30 Sample Depth: 23 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	238	10.1	mg/kg	08.06.2020 22:28		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.06.2020 22:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.06.2020 22:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.06.2020 22:47	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.06.2020 22:47	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.06.2020 22:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.06.2020 22:47	
o-Terphenyl	84-15-1	106	%	70-135	08.06.2020 22:47	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 E**
Lab Sample Id: 669401-026

Matrix: Soil
Date Collected: 08.05.2020 13:30

Date Received: 08.06.2020 13:09
Sample Depth: 23 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.06.2020 23:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.06.2020 23:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	82	%	70-130	08.06.2020 23:55	
4-Bromofluorobenzene	460-00-4	93	%	70-130	08.06.2020 23:55	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 F** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-027 Date Collected: 08.05.2020 14:40 Sample Depth: 31 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	10.0	mg/kg	08.06.2020 22:34		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.06.2020 23:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.06.2020 23:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.06.2020 23:07	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.06.2020 23:07	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.06.2020 23:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	08.06.2020 23:07	
o-Terphenyl	84-15-1	104	%	70-135	08.06.2020 23:07	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 F**
Lab Sample Id: 669401-027

Matrix: Soil
Date Collected: 08.05.2020 14:40

Date Received: 08.06.2020 13:09
Sample Depth: 31 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.07.2020 00:16	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.2020 00:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 00:16		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.07.2020 00:16		



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EMSU B 865

Sample Id: **BH16 G** Matrix: Soil Date Received: 08.06.2020 13:09
 Lab Sample Id: 669401-028 Date Collected: 08.05.2020 14:45 Sample Depth: 32 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.06.2020 17:00 Basis: Wet Weight
 Seq Number: 3133869

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	81.7	9.94	mg/kg	08.06.2020 22:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.06.2020 17:15 Basis: Wet Weight
 Seq Number: 3133852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.06.2020 23:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 23:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 23:48	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.06.2020 23:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 23:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.06.2020 23:48	
o-Terphenyl	84-15-1	105	%	70-135	08.06.2020 23:48	



Certificate of Analytical Results 669401

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **BH16 G**
Lab Sample Id: 669401-028

Matrix: Soil
Date Collected: 08.05.2020 14:45

Date Received: 08.06.2020 13:09
Sample Depth: 32 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MRB

Date Prep: 08.06.2020 16:55

Basis: Wet Weight

Seq Number: 3133865

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 00:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 00:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 00:36		
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.07.2020 00:36		

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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3133867

MB Sample Id: 7708945-1-BLK

Matrix: Solid

LCS Sample Id: 7708945-1-BKS

Prep Method: E300P

Date Prep: 08.06.2020

LCSD Sample Id: 7708945-1-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	269	108	268	107	90-110	0	20	mg/kg	08.06.2020 18:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3133869

MB Sample Id: 7708949-1-BLK

Matrix: Solid

LCS Sample Id: 7708949-1-BKS

Prep Method: E300P

Date Prep: 08.06.2020

LCSD Sample Id: 7708949-1-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	270	108	268	107	90-110	1	20	mg/kg	08.06.2020 21:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3133867

Parent Sample Id: 669384-001

Matrix: Soil

MS Sample Id: 669384-001 S

Prep Method: E300P

Date Prep: 08.06.2020

MSD Sample Id: 669384-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4550	202	4760	104	4760	104	90-110	0	20	mg/kg	08.06.2020 18:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3133869

Parent Sample Id: 669401-018

Matrix: Soil

MS Sample Id: 669401-018 S

Prep Method: E300P

Date Prep: 08.06.2020

MSD Sample Id: 669401-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	402	199	607	103	605	102	90-110	0	20	mg/kg	08.06.2020 21:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3133869

Parent Sample Id: 669401-028

Matrix: Soil

MS Sample Id: 669401-028 S

Prep Method: E300P

Date Prep: 08.06.2020

MSD Sample Id: 669401-028 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	81.7	200	288	103	287	103	90-110	0	20	mg/kg	08.06.2020 22:45	

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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133751

MB Sample Id: 7708853-1-BLK

Matrix: Solid

LCS Sample Id: 7708853-1-BKS

Prep Method: SW8015P

Date Prep: 08.06.2020

LCSD Sample Id: 7708853-1-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	1020	102	1030	103	70-135	1	35	mg/kg	08.06.2020 10:04	
Diesel Range Organics (DRO)	<50.0	1000	1060	106	1090	109	70-135	3	35	mg/kg	08.06.2020 10:04	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		124		124		70-135	%	08.06.2020 10:04
o-Terphenyl	109		113		116		70-135	%	08.06.2020 10:04

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133852

MB Sample Id: 7708910-1-BLK

Matrix: Solid

LCS Sample Id: 7708910-1-BKS

Prep Method: SW8015P

Date Prep: 08.06.2020

LCSD Sample Id: 7708910-1-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	1060	106	70-135	6	35	mg/kg	08.06.2020 18:44	
Diesel Range Organics (DRO)	<50.0	1000	1090	109	1150	115	70-135	5	35	mg/kg	08.06.2020 18:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	114		134		122		70-135	%	08.06.2020 18:44
o-Terphenyl	114		123		116		70-135	%	08.06.2020 18:44

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133751

Matrix: Solid

MB Sample Id: 7708853-1-BLK

Prep Method: SW8015P

Date Prep: 08.06.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.06.2020 09:44	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133852

Matrix: Solid

MB Sample Id: 7708910-1-BLK

Prep Method: SW8015P

Date Prep: 08.06.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.06.2020 18:24	

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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133751

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.06.2020

Parent Sample Id: 669190-004

MS Sample Id: 669190-004 S

MSD Sample Id: 669190-004 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	981	98	946	95	70-135	4	35	mg/kg	08.06.2020 11:05	
Diesel Range Organics (DRO)	<50.1	1000	1020	102	985	99	70-135	3	35	mg/kg	08.06.2020 11:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		119		70-135	%	08.06.2020 11:05
o-Terphenyl	112		109		70-135	%	08.06.2020 11:05

Analytical Method: TPH by SW8015 Mod

Seq Number: 3133852

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.06.2020

Parent Sample Id: 669401-018

MS Sample Id: 669401-018 S

MSD Sample Id: 669401-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	997	100	1010	101	70-135	1	35	mg/kg	08.06.2020 19:44	
Diesel Range Organics (DRO)	<49.8	995	1070	108	1080	108	70-135	1	35	mg/kg	08.06.2020 19:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		123		70-135	%	08.06.2020 19:44
o-Terphenyl	118		116		70-135	%	08.06.2020 19:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133863

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.06.2020

MB Sample Id: 7708937-1-BLK

LCS Sample Id: 7708937-1-BKS

LCSD Sample Id: 7708937-1-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	0.112	112	0.111	111	70-130	1	35	mg/kg	08.06.2020 17:36	
Toluene	<0.00200	0.100	0.106	106	0.106	106	70-130	0	35	mg/kg	08.06.2020 17:36	
Ethylbenzene	<0.00200	0.100	0.0996	100	0.0988	99	71-129	1	35	mg/kg	08.06.2020 17:36	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.200	100	70-135	1	35	mg/kg	08.06.2020 17:36	
o-Xylene	<0.00200	0.100	0.0996	100	0.0989	99	71-133	1	35	mg/kg	08.06.2020 17:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		99		70-130	%	08.06.2020 17:36
4-Bromofluorobenzene	96		103		104		70-130	%	08.06.2020 17:36

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 B 865

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133865

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.06.2020

MB Sample Id: 7708938-1-BLK

LCS Sample Id: 7708938-1-BKS

LCSD Sample Id: 7708938-1-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	0.101	101	0.102	102	70-130	1	35	mg/kg	08.06.2020 17:39	
Toluene	<0.00200	0.100	0.0958	96	0.0958	96	70-130	0	35	mg/kg	08.06.2020 17:39	
Ethylbenzene	<0.00200	0.100	0.0998	100	0.0994	99	71-129	0	35	mg/kg	08.06.2020 17:39	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.203	102	70-135	0	35	mg/kg	08.06.2020 17:39	
o-Xylene	<0.00200	0.100	0.100	100	0.0999	100	71-133	0	35	mg/kg	08.06.2020 17:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		97		97		70-130	%	08.06.2020 17:39
4-Bromofluorobenzene	102		100		98		70-130	%	08.06.2020 17:39

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133863

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.06.2020

Parent Sample Id: 669401-001

MS Sample Id: 669401-001 S

MSD Sample Id: 669401-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.125	124	0.124	124	70-130	1	35	mg/kg	08.06.2020 18:21	
Toluene	<0.00201	0.101	0.128	127	0.127	127	70-130	1	35	mg/kg	08.06.2020 18:21	
Ethylbenzene	<0.00201	0.101	0.120	119	0.119	119	71-129	1	35	mg/kg	08.06.2020 18:21	
m,p-Xylenes	<0.00402	0.201	0.248	123	0.245	123	70-135	1	35	mg/kg	08.06.2020 18:21	
o-Xylene	<0.00201	0.101	0.120	119	0.118	118	71-133	2	35	mg/kg	08.06.2020 18:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	08.06.2020 18:21
4-Bromofluorobenzene	104		103		70-130	%	08.06.2020 18:21

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133865

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.06.2020

Parent Sample Id: 669317-001

MS Sample Id: 669317-001 S

MSD Sample Id: 669317-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.101	101	0.0977	97	70-130	3	35	mg/kg	08.06.2020 18:20	
Toluene	<0.00201	0.100	0.0904	90	0.0918	91	70-130	2	35	mg/kg	08.06.2020 18:20	
Ethylbenzene	<0.00201	0.100	0.0896	90	0.0957	95	71-129	7	35	mg/kg	08.06.2020 18:20	
m,p-Xylenes	<0.00402	0.201	0.179	89	0.194	97	70-135	8	35	mg/kg	08.06.2020 18:20	
o-Xylene	<0.00201	0.100	0.0862	86	0.0964	95	71-133	11	35	mg/kg	08.06.2020 18:20	

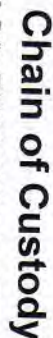
Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		97		70-130	%	08.06.2020 18:20
4-Bromofluorobenzene	103		98		70-130	%	08.06.2020 18:20

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



669401

Page 1 of 3ANALYSIS REQUEST

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

Sample Comments

1631 / 245.1 / 7470 / 7471 : Hg

Revised Date 051418 Rev. 2018.1



Chain of Custody

Work Order No: 669401

Page 2 of 3

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

Project Name:	EMS B 865	Turn Around	
Project Number:	12919105	Routine	
P.O. Number:	Lea	Rush:	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
	Temperature (°C):	Thermometer ID				
	Received Intact:	Yes	No	Correction Factor:	3.0	
	Cooler Custody Seals:	Yes	No	N/A		
	Sample Custody Seals:	Yes	No	N/A		
Total Containers:						

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST													Work Order Notes
BH14F	S	8/4/2020	16:10	1'	1	X	X	X										Discrete
BH14G	S	8/4/2020	16:15	10'	1	X	X	X										Discrete
BH15	S	8/5/2020	8:50	1'	1	X	X	X										Discrete
BH15A	S	8/5/2020	9:05	10'	1	X	X	X										Discrete
BH15B	S	8/5/2020	9:30	15'	1	X	X	X										Discrete
BH15C	S	8/5/2020	9:40	17'	1	X	X	X										Discrete
BH15D	S	8/5/2020	9:50	19'	1	X	X	X										Discrete
BH15E	S	8/5/2020	10:10	23'	1	X	X	X										Discrete
BH15F	S	8/5/2020	10:55	31'	1	X	X	X										Discrete
BH15G	S	8/5/2020	11:15	32'	1	X	X	X										Discrete

Total 200.7 / 6010 200.8 / 6020:

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

Note: 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 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 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
<i>[Signature]</i>	<i>[Signature]</i>	08/06/20 13:09			



Chain of Custody

Work Order No:

669401

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) 233-3333
Hobbs, NM (575) 392-7550

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Page 2 of 2

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

Work Order Comments	
Program: UST/PST State of Project: Reporting Level II Deliverables: EDD	☐ RP ☐ Growfields ☐ RC ☐ \$perfund ☐ Level III ☐ ST/UST ☐ RP ☒ Level IV ☐ ADAPT ☐ Other:

Project Name:	EMSU B 865	Turn Around
Project Number:	42919105	Routine ☒
P. O. Number:	Lea	Rush: ☐
Sampler's Name:	William Mather	Due Date:

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

[illegible]

Total	200.7 / 6010	200.8 / 6020:	
<i>Circle Method(s) and Metal(s) to be analyzed</i>			
	8RCRA	13PPM	Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO ₂ Na Sr Ti Sn U V Zn TCLP / SPLP 6010- 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
Note: 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 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 Xenco. A minimum charge of \$76.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.			
			1631 / 245.1 / 7470 / 7471 : Hg

[illegible]

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.06.2020 01.09.00 PM

Work Order #: 669401

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : TN M 007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	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:



Martha Castro

Date: 08.06.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.07.2020

Certificate of Analysis Summary 670985



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Wed 08.26.2020 08:16

Report Date: 08.28.2020 10:41

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	670985-001	670985-002	670985-003	670985-004	670985-005	670985-006
	Field Id:	SW01	SW02	SW03	SW04	FS01	FS02
	Depth:	0-4 ft	0-4 ft	0-4 ft	0-4 ft	2-4 ft	2-4 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.25.2020 10:12	08.25.2020 10:15	08.25.2020 10:47	08.25.2020 10:49	08.25.2020 12:40	08.25.2020 12:41
BTEX by EPA 8021B	Extracted:	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44
	Analyzed:	08.26.2020 17:57	08.26.2020 18:20	08.26.2020 18:42	08.26.2020 19:05	08.26.2020 19:27	08.26.2020 20:45
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00397 0.00397	<0.00400 0.00400	<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Chloride by EPA 300	Extracted:	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30
	Analyzed:	08.26.2020 16:33	08.26.2020 16:39	08.26.2020 16:44	08.26.2020 16:50	08.26.2020 16:55	08.26.2020 17:01
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<10.1 10.1	<9.90 9.90	13.6 10.0	14.1 9.92	371 9.92	45.2 9.92
TPH by SW8015 Mod	Extracted:	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00
	Analyzed:	08.26.2020 16:21	08.26.2020 17:01	08.26.2020 17:23	08.26.2020 17:43	08.26.2020 18:03	08.26.2020 18:22
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.3 50.3	<49.8 49.8
Diesel Range Organics (DRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.3 50.3	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.3 50.3	<49.8 49.8
Total GRO-DRO		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.3 50.3	<49.8 49.8
Total TPH		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.3 50.3	<49.8 49.8

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 670985



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Wed 08.26.2020 08:16

Report Date: 08.28.2020 10:41

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	670985-007	670985-008	670985-009	670985-010	670985-011	670985-012
	<i>Field Id:</i>	FS03	FS04	FS05	FS06	FS07	FS08
	<i>Depth:</i>	2-4 ft	4- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.25.2020 12:43	08.25.2020 13:14	08.25.2020 13:15	08.25.2020 13:16	08.25.2020 13:52	08.25.2020 13:54
BTEX by EPA 8021B	<i>Extracted:</i>	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44	08.26.2020 15:44
	<i>Analyzed:</i>	08.26.2020 21:07	08.26.2020 21:30	08.26.2020 21:52	08.26.2020 22:15	08.26.2020 22:37	08.26.2020 23:00
	<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	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00398 0.00398	<0.00403 0.00403	<0.00399 0.00399	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30	08.26.2020 14:30
	<i>Analyzed:</i>	08.26.2020 17:18	08.26.2020 17:23	08.26.2020 17:40	08.26.2020 17:46	08.26.2020 17:51	08.26.2020 17:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		13.1 10.0	23.6 10.0	37.4 10.0	<9.92 9.92	14.1 10.0	<9.92 9.92
TPH by SW8015 Mod	<i>Extracted:</i>	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 14:00	08.26.2020 12:15
	<i>Analyzed:</i>	08.26.2020 18:43	08.26.2020 19:03	08.26.2020 19:23	08.26.2020 19:43	08.26.2020 20:03	08.26.2020 12:39
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2
Total GRO-DRO		<49.9 49.9	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2
Total TPH		<49.9 49.9	<50.0 50.0	<50.2 50.2	<50.1 50.1	<50.1 50.1	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 670985



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Wed 08.26.2020 08:16

Report Date: 08.28.2020 10:41

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	670985-013					
	Field Id:	FS09					
	Depth:	4- ft					
	Matrix:	SOIL					
	Sampled:	08.25.2020 13:55					
BTEX by EPA 8021B	Extracted:	08.26.2020 15:44					
	Analyzed:	08.26.2020 23:22					
	Units/RL:	mg/kg RL					
Benzene		<0.00202 0.00202					
Toluene		<0.00202 0.00202					
Ethylbenzene		<0.00202 0.00202					
m,p-Xylenes		<0.00404 0.00404					
o-Xylene		<0.00202 0.00202					
Total Xylenes		<0.00202 0.00202					
Total BTEX		<0.00202 0.00202					
Chloride by EPA 300	Extracted:	08.26.2020 14:30					
	Analyzed:	08.26.2020 18:02					
	Units/RL:	mg/kg RL					
Chloride		<9.94 9.94					
TPH by SW8015 Mod	Extracted:	08.26.2020 12:15					
	Analyzed:	08.26.2020 13:40					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8					
Diesel Range Organics (DRO)		<49.8 49.8					
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8					
Total GRO-DRO		<49.8 49.8					
Total TPH		<49.8 49.8					

BRL - Below Reporting Limit

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



Analytical Report 670985

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

012919105

08.28.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.28.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **670985**

EMSU B 865

Project Address: Lea 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 Eurofins Xenco, LLC Report Number(s) 670985. 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 Eurofins Xenco, LLC. 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. 670985 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 670985****LT Environmental, Inc., Arvada, CO**

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	08.25.2020 10:12	0 - 4 ft	670985-001
SW02	S	08.25.2020 10:15	0 - 4 ft	670985-002
SW03	S	08.25.2020 10:47	0 - 4 ft	670985-003
SW04	S	08.25.2020 10:49	0 - 4 ft	670985-004
FS01	S	08.25.2020 12:40	2 - 4 ft	670985-005
FS02	S	08.25.2020 12:41	2 - 4 ft	670985-006
FS03	S	08.25.2020 12:43	2 - 4 ft	670985-007
FS04	S	08.25.2020 13:14	4 ft	670985-008
FS05	S	08.25.2020 13:15	4 ft	670985-009
FS06	S	08.25.2020 13:16	4 ft	670985-010
FS07	S	08.25.2020 13:52	4 ft	670985-011
FS08	S	08.25.2020 13:54	4 ft	670985-012
FS09	S	08.25.2020 13:55	4 ft	670985-013



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 012919105
Work Order Number(s): 670985

Report Date: 08.28.2020
Date Received: 08.26.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW01** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-001 Date Collected: 08.25.2020 10:12 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	08.26.2020 16:33	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.26.2020 16:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.26.2020 16:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.26.2020 16:21	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.26.2020 16:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.26.2020 16:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	08.26.2020 16:21	
o-Terphenyl	84-15-1	106	%	70-135	08.26.2020 16:21	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW01**
Lab Sample Id: 670985-001

Matrix: Soil
Date Collected: 08.25.2020 10:12

Date Received: 08.26.2020 08:16
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.26.2020 17:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 17:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.26.2020 17:57	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.26.2020 17:57	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW02** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-002 Date Collected: 08.25.2020 10:15 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	08.26.2020 16:39	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.26.2020 17:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.26.2020 17:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.26.2020 17:01	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.26.2020 17:01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.26.2020 17:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-135	08.26.2020 17:01	
o-Terphenyl	84-15-1	106	%	70-135	08.26.2020 17:01	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW02**
Lab Sample Id: 670985-002

Matrix: Soil
Date Collected: 08.25.2020 10:15

Date Received: 08.26.2020 08:16
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.26.2020 18:20	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.26.2020 18:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.26.2020 18:20	
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.26.2020 18:20	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW03** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-003 Date Collected: 08.25.2020 10:47 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.6	10.0	mg/kg	08.26.2020 16:44		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.26.2020 17:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.26.2020 17:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.26.2020 17:23	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.26.2020 17:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.26.2020 17:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.26.2020 17:23	
o-Terphenyl	84-15-1	103	%	70-135	08.26.2020 17:23	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW03**
Lab Sample Id: 670985-003

Matrix: Soil
Date Collected: 08.25.2020 10:47

Date Received: 08.26.2020 08:16
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135666

Prep Method: SW5035A

% Moisture:

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.26.2020 18:42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 18:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.26.2020 18:42		
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.26.2020 18:42		



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EMSU B 865

Sample Id: **SW04** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-004 Date Collected: 08.25.2020 10:49 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.1	9.92	mg/kg	08.26.2020 16:50		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.26.2020 17:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.26.2020 17:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.26.2020 17:43	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.26.2020 17:43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.26.2020 17:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	08.26.2020 17:43	
o-Terphenyl	84-15-1	105	%	70-135	08.26.2020 17:43	



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EMSU B 865

Sample Id: **SW04**
Lab Sample Id: 670985-004

Matrix: Soil
Date Collected: 08.25.2020 10:49

Date Received: 08.26.2020 08:16
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.26.2020 19:05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 19:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.26.2020 19:05	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.26.2020 19:05	



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EMSU B 865

Sample Id: **FS01** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-005 Date Collected: 08.25.2020 12:40 Sample Depth: 2 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	371	9.92	mg/kg	08.26.2020 16:55		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.26.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.26.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.26.2020 18:03	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.26.2020 18:03	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.26.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.26.2020 18:03	
o-Terphenyl	84-15-1	105	%	70-135	08.26.2020 18:03	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS01**
Lab Sample Id: 670985-005

Matrix: Soil
Date Collected: 08.25.2020 12:40

Date Received: 08.26.2020 08:16
Sample Depth: 2 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.2020 19:27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.2020 19:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.26.2020 19:27	
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.26.2020 19:27	



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EMSU B 865

Sample Id: **FS02** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-006 Date Collected: 08.25.2020 12:41 Sample Depth: 2 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	45.2	9.92	mg/kg	08.26.2020 17:01		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.26.2020 18:22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.26.2020 18:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.26.2020 18:22	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.26.2020 18:22	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.26.2020 18:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.26.2020 18:22	
o-Terphenyl	84-15-1	102	%	70-135	08.26.2020 18:22	



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EMSU B 865

Sample Id: **FS02**
Lab Sample Id: 670985-006

Matrix: Soil
Date Collected: 08.25.2020 12:41

Date Received: 08.26.2020 08:16
Sample Depth: 2 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.2020 20:45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.2020 20:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.26.2020 20:45	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.26.2020 20:45	



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Sample Id: **FS03** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-007 Date Collected: 08.25.2020 12:43 Sample Depth: 2 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.1	10.0	mg/kg	08.26.2020 17:18		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.26.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.26.2020 18:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.26.2020 18:43	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.26.2020 18:43	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.26.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.26.2020 18:43	
o-Terphenyl	84-15-1	98	%	70-135	08.26.2020 18:43	



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EMSU B 865

Sample Id: **FS03**
Lab Sample Id: 670985-007

Matrix: Soil
Date Collected: 08.25.2020 12:43

Date Received: 08.26.2020 08:16
Sample Depth: 2 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.26.2020 21:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 21:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.26.2020 21:07	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.26.2020 21:07	



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Sample Id: **FS04** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-008 Date Collected: 08.25.2020 13:14 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.6	10.0	mg/kg	08.26.2020 17:23		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.26.2020 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.26.2020 19:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.26.2020 19:03	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.26.2020 19:03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.26.2020 19:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.26.2020 19:03	
o-Terphenyl	84-15-1	99	%	70-135	08.26.2020 19:03	



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Sample Id: **FS04**
Lab Sample Id: 670985-008

Matrix: Soil
Date Collected: 08.25.2020 13:14

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.2020 21:30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.2020 21:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.26.2020 21:30	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.26.2020 21:30	



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Sample Id: **FS05** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-009 Date Collected: 08.25.2020 13:15 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.4	10.0	mg/kg	08.26.2020 17:40		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.26.2020 19:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.26.2020 19:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.26.2020 19:23	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.26.2020 19:23	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.26.2020 19:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	08.26.2020 19:23	
o-Terphenyl	84-15-1	100	%	70-135	08.26.2020 19:23	



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EMSU B 865

Sample Id: **FS05**
Lab Sample Id: 670985-009

Matrix: Soil
Date Collected: 08.25.2020 13:15

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.2020 21:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.2020 21:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.26.2020 21:52	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.26.2020 21:52	



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EMSU B 865

Sample Id: **FS06** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-010 Date Collected: 08.25.2020 13:16 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	08.26.2020 17:46	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.26.2020 19:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.26.2020 19:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.26.2020 19:43	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.26.2020 19:43	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.26.2020 19:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.26.2020 19:43	
o-Terphenyl	84-15-1	97	%	70-135	08.26.2020 19:43	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS06**
Lab Sample Id: 670985-010

Matrix: Soil
Date Collected: 08.25.2020 13:16

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.26.2020 22:15	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.26.2020 22:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.26.2020 22:15	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.26.2020 22:15	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS07** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-011 Date Collected: 08.25.2020 13:52 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.1	10.0	mg/kg	08.26.2020 17:51		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 14:00 Basis: Wet Weight
 Seq Number: 3135668

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.26.2020 20:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.26.2020 20:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.26.2020 20:03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.26.2020 20:03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.26.2020 20:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.26.2020 20:03	
o-Terphenyl	84-15-1	105	%	70-135	08.26.2020 20:03	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS07**
Lab Sample Id: 670985-011

Matrix: Soil
Date Collected: 08.25.2020 13:52

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.26.2020 22:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 22:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.26.2020 22:37	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.26.2020 22:37	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS08** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-012 Date Collected: 08.25.2020 13:54 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.92	9.92	mg/kg	08.26.2020 17:57	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 12:15 Basis: Wet Weight
 Seq Number: 3135677

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.26.2020 12:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.26.2020 12:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.26.2020 12:39	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.26.2020 12:39	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.26.2020 12:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.26.2020 12:39	
o-Terphenyl	84-15-1	121	%	70-135	08.26.2020 12:39	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS08**
Lab Sample Id: 670985-012

Matrix: Soil
Date Collected: 08.25.2020 13:54

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135666

Prep Method: SW5035A

% Moisture:

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.26.2020 23:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.2020 23:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.26.2020 23:00		
4-Bromofluorobenzene	460-00-4	86	%	70-130	08.26.2020 23:00		



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS09** Matrix: Soil Date Received: 08.26.2020 08:16
 Lab Sample Id: 670985-013 Date Collected: 08.25.2020 13:55 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MRB Date Prep: 08.26.2020 14:30 Basis: Wet Weight
 Seq Number: 3135670

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.94	9.94	mg/kg	08.26.2020 18:02	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.26.2020 12:15 Basis: Wet Weight
 Seq Number: 3135677

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.26.2020 13:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.26.2020 13:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.26.2020 13:40	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.26.2020 13:40	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.26.2020 13:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.26.2020 13:40	
o-Terphenyl	84-15-1	118	%	70-135	08.26.2020 13:40	



Certificate of Analytical Results 670985

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS09**
Lab Sample Id: 670985-013

Matrix: Soil
Date Collected: 08.25.2020 13:55

Date Received: 08.26.2020 08:16
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.26.2020 15:44

Basis: Wet Weight

Seq Number: 3135666

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.26.2020 23:22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.26.2020 23:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85	%	70-130	08.26.2020 23:22	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.26.2020 23:22	



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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3135670

MB Sample Id: 7710228-1-BLK

Matrix: Solid

LCS Sample Id: 7710228-1-BKS

Prep Method: E300P

Date Prep: 08.26.2020

LCSD Sample Id: 7710228-1-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	263	105	266	106	90-110	1	20	mg/kg	08.26.2020 15:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3135670

Parent Sample Id: 670983-001

Matrix: Soil

MS Sample Id: 670983-001 S

Prep Method: E300P

Date Prep: 08.26.2020

MSD Sample Id: 670983-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.98	200	208	104	208	104	90-110	0	20	mg/kg	08.26.2020 15:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3135670

Parent Sample Id: 670985-006

Matrix: Soil

MS Sample Id: 670985-006 S

Prep Method: E300P

Date Prep: 08.26.2020

MSD Sample Id: 670985-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	45.2	199	249	102	249	102	90-110	0	20	mg/kg	08.26.2020 17:06	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135668

MB Sample Id: 7710216-1-BLK

Matrix: Solid

LCS Sample Id: 7710216-1-BKS

Prep Method: SW8015P

Date Prep: 08.26.2020

LCSD Sample Id: 7710216-1-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	940	94	961	96	70-135	2	35	mg/kg	08.26.2020 11:59	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1030	103	70-135	1	35	mg/kg	08.26.2020 11:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		129		130		70-135	%	08.26.2020 11:59
o-Terphenyl	112		122		115		70-135	%	08.26.2020 11:59

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135677

MB Sample Id: 7710220-1-BLK

Matrix: Solid

LCS Sample Id: 7710220-1-BKS

Prep Method: SW8015P

Date Prep: 08.26.2020

LCSD Sample Id: 7710220-1-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	993	99	1030	103	70-135	4	35	mg/kg	08.26.2020 11:59	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1090	109	70-135	1	35	mg/kg	08.26.2020 11:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		134		131		70-135	%	08.26.2020 11:59
o-Terphenyl	121		130		122		70-135	%	08.26.2020 11:59

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135668

Matrix: Solid

Prep Method: SW8015P

Date Prep: 08.26.2020

MB Sample Id: 7710216-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

08.26.2020 11:38

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135677

Matrix: Solid

Prep Method: SW8015P

Date Prep: 08.26.2020

MB Sample Id: 7710220-1-BLK

Parameter

Motor Oil Range Hydrocarbons (MRO)

MB
Result

<50.0

Units

mg/kg

Analysis
Date

08.26.2020 11:38

Flag

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135668

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.26.2020

Parent Sample Id: 670983-001

MS Sample Id: 670983-001 S

MSD Sample Id: 670983-001 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.0

Spike
Amount

999

MS
Result

931

MS
%Rec

93

MSD
Result

956

MSD
%Rec

96

Limits

70-135

%RPD

3

RPD
Limit

35

Units

mg/kg

Analysis
Date

08.26.2020 12:59

Flag

Diesel Range Organics (DRO)

<50.0

999

990

99

1040

104

70-135

5

35

mg/kg

08.26.2020 12:59

Surrogate

1-Chlorooctane

MS
%Rec

133

MS
FlagMSD
%Rec

129

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

08.26.2020 12:59

o-Terphenyl

117

122

70-135

%

08.26.2020 12:59

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135677

Matrix: Soil

Prep Method: SW8015P

Date Prep: 08.26.2020

Parent Sample Id: 670985-012

MS Sample Id: 670985-012 S

MSD Sample Id: 670985-012 SD

Parameter

Gasoline Range Hydrocarbons (GRO)

Parent
Result

<50.0

Spike
Amount

1000

MS
Result

1000

MS
%Rec

100

MSD
Result

1100

MSD
%Rec

111

Limits

70-135

%RPD

10

RPD
Limit

35

Units

mg/kg

Analysis
Date

08.26.2020 12:59

Flag

Diesel Range Organics (DRO)

<50.0

1000

1080

108

1050

106

70-135

3

35

mg/kg

08.26.2020 12:59

Surrogate

1-Chlorooctane

MS
%Rec

135

MS
FlagMSD
%Rec

132

MSD
Flag

Limits

70-135

Units

%

Analysis
Date

08.26.2020 12:59

o-Terphenyl

128

115

70-135

%

08.26.2020 12:59

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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 B 865

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135666

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.26.2020

MB Sample Id: 7710235-1-BLK

LCS Sample Id: 7710235-1-BKS

LCSD Sample Id: 7710235-1-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	08.26.2020 14:02	
Toluene	<0.00200	0.100	0.105	105	0.107	107	70-130	2	35	mg/kg	08.26.2020 14:02	
Ethylbenzene	<0.00200	0.100	0.0971	97	0.0991	99	71-129	2	35	mg/kg	08.26.2020 14:02	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.201	101	70-135	3	35	mg/kg	08.26.2020 14:02	
o-Xylene	<0.00200	0.100	0.0969	97	0.0992	99	71-133	2	35	mg/kg	08.26.2020 14:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		99		70-130	%	08.26.2020 14:02
4-Bromofluorobenzene	88		89		88		70-130	%	08.26.2020 14:02

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135666

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.26.2020

Parent Sample Id: 670983-001

MS Sample Id: 670983-001 S

MSD Sample Id: 670983-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.114	114	0.106	106	70-130	7	35	mg/kg	08.26.2020 14:47	
Toluene	<0.00199	0.0996	0.108	108	0.0986	99	70-130	9	35	mg/kg	08.26.2020 14:47	
Ethylbenzene	<0.00199	0.0996	0.0969	97	0.0873	88	71-129	10	35	mg/kg	08.26.2020 14:47	
m,p-Xylenes	<0.00398	0.199	0.195	98	0.175	88	70-135	11	35	mg/kg	08.26.2020 14:47	
o-Xylene	<0.00199	0.0996	0.0960	96	0.0862	87	71-133	11	35	mg/kg	08.26.2020 14:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		101		70-130	%	08.26.2020 14:47
4-Bromofluorobenzene	91		86		70-130	%	08.26.2020 14:47

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

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

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

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



Chain of Custody

Work Order No: 4270985

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 (505) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littlell
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

Project Name:	EMSU B 865	Turn Around:	
Project Number:	012919105	Routine:	☒
P.O. Number:	Lea	Rush:	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	3.4 / 3.2	Temp Blank:	Yes No
Received Intact:	Yes No	Wet Ice:	Yes No
Cooler Custody Seals:	Yes No N/A	Thermometer ID	
Sample Custody Seals:	Yes No N/A	Correction Factor:	
		Total Containers:	

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA 8015)	BTEX (EPA 8061)	Chloride (EPA 8062)	Sample Comments									
SW01					S	8/25/2020	10:12	0-4'	1	X	X	X	Composite									
SW02					S	8/25/2020	10:15	0-4'	1	X	X	X	Composite									
SW03					S	8/25/2020	10:47	0-4'	1	X	X	X	Composite									
SW04					S	8/25/2020	10:49	0-4'	1	X	X	X	Composite									
FS01					S	8/25/2020	12:40	2-4'	1	X	X	X	Composite									
FS02					S	8/25/2020	12:41	2-4'	1	X	X	X	Composite									
FS03					S	8/25/2020	12:43	2-4'	1	X	X	X	Composite									
FS04					S	8/25/2020	13:14	4'	1	X	X	X	Composite									
FS05					S	8/25/2020	13:15	4'	1	X	X	X	Composite									
FS06					S	8/25/2020	13:16	4'	1	X	X	X	Composite									

Total 200.7 / 6010 200.8 / 6020:

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco. Its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$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
<i>[Signature]</i>	<i>[Signature]</i>	8/26/20 10:00	<i>[Signature]</i>	<i>[Signature]</i>	08/26/20 08/1



Work Order No: 6070985

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 (81

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Page 2 of 2

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

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

[illegible]

1 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
		8-26-2017:00am			082620 08

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.26.2020 08.16.00 AM

Work Order #: 670985

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.26.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.26.2020

Certificate of Analysis Summary 671133



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Thu 08.27.2020 09:08

Report Date: 08.31.2020 10:02

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671133-001	671133-002	671133-003	671133-004	671133-005	671133-006
	Field Id:	SW05	SW06	SW07	SW08	SW09	SW10
	Depth:	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-4 ft	0-5 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.26.2020 09:56	08.26.2020 09:58	08.26.2020 09:59	08.26.2020 14:20	08.26.2020 14:21	08.26.2020 14:38
BTEX by EPA 8021B	Extracted:	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08
	Analyzed:	08.27.2020 15:16	08.27.2020 15:38	08.27.2020 16:01	08.27.2020 16:23	08.27.2020 16:46	08.27.2020 17:08
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00399 0.00399	<0.00404 0.00404	<0.00397 0.00397	<0.00399 0.00399	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	Extracted:	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26
	Analyzed:	08.27.2020 15:30	08.27.2020 15:47	08.27.2020 15:53	08.27.2020 15:58	08.27.2020 16:04	08.27.2020 16:20
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		10.8 9.94	23.7 9.98	15.2 10.1	452 50.4	210 50.3	380 50.5
TPH by SW8015 Mod	Extracted:	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00
	Analyzed:	08.27.2020 16:29	08.27.2020 16:50	08.27.2020 17:10	08.27.2020 17:30	08.28.2020 09:45	08.28.2020 10:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.8 49.8
Total GRO-DRO		<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.8 49.8
Total TPH		<50.3 50.3	<49.9 49.9	<49.8 49.8	<50.1 50.1	<49.9 49.9	<49.8 49.8

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 671133



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Thu 08.27.2020 09:08

Report Date: 08.31.2020 10:02

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671133-007	671133-008	671133-009	671133-010	671133-011	671133-012
	Field Id:	FS10	FS11	FS12	FS13	FS14	FS15
	Depth:	4- ft	4- ft	4- ft	4- ft	4- ft	4- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.26.2020 10:29	08.26.2020 10:31	08.26.2020 10:32	08.26.2020 10:34	08.26.2020 10:35	08.26.2020 10:37
BTEX by EPA 8021B	Extracted:	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08
	Analyzed:	08.27.2020 17:31	08.27.2020 17:53	08.27.2020 18:16	08.27.2020 18:38	08.27.2020 19:56	08.27.2020 20:19
	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	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00404 0.00404	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300	Extracted:	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26
	Analyzed:	08.27.2020 16:26	08.27.2020 16:32	08.27.2020 16:37	08.27.2020 16:43	08.27.2020 16:48	08.27.2020 17:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		232 9.90	291 9.98	253 9.94	102 9.98	286 50.1	151 9.98
TPH by SW8015 Mod	Extracted:	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00
	Analyzed:	08.27.2020 17:50	08.27.2020 18:11	08.27.2020 18:51	08.27.2020 19:12	08.28.2020 09:24	08.27.2020 19:32
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.0 50.0	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.0 50.0	<49.8 49.8
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.0 50.0	<49.8 49.8
Total TPH		<50.0 50.0	<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.0 50.0	<49.8 49.8

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 671133



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Thu 08.27.2020 09:08

Report Date: 08.31.2020 10:02

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	671133-013	671133-014	671133-015			
	<i>Field Id:</i>	FS16	FS17	FS18			
	<i>Depth:</i>	4- ft	4- ft	4- ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	08.26.2020 10:46	08.26.2020 10:48	08.26.2020 10:49			
BTEX by EPA 8021B	<i>Extracted:</i>	08.27.2020 12:08	08.27.2020 12:08	08.27.2020 12:08			
	<i>Analyzed:</i>	08.27.2020 20:41	08.27.2020 21:03	08.27.2020 21:26			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
m,p-Xylenes		<0.00401 0.00401	<0.00401 0.00401	<0.00402 0.00402			
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201			
Chloride by EPA 300	<i>Extracted:</i>	08.27.2020 13:26	08.27.2020 13:26	08.27.2020 13:26			
	<i>Analyzed:</i>	08.27.2020 17:11	08.27.2020 17:27	08.27.2020 17:33			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		76.9 9.98	271 49.6	35.2 9.98			
TPH by SW8015 Mod	<i>Extracted:</i>	08.27.2020 13:00	08.27.2020 13:00	08.27.2020 13:00			
	<i>Analyzed:</i>	08.27.2020 19:52	08.27.2020 20:12	08.27.2020 20:32			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1			
Diesel Range Organics (DRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.2 50.2	<50.1 50.1			
Total GRO-DRO		<50.2 50.2	<50.2 50.2	<50.1 50.1			
Total TPH		<50.2 50.2	<50.2 50.2	<50.1 50.1			

BRL - Below Reporting Limit

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



Analytical Report 671133

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

012919105

08.31.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.31.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **671133**

EMSU B 865

Project Address: Lea 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 Eurofins Xenco, LLC Report Number(s) 671133. 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 Eurofins Xenco, LLC. 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. 671133 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 671133****LT Environmental, Inc., Arvada, CO**

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW05	S	08.26.2020 09:56	0 - 4 ft	671133-001
SW06	S	08.26.2020 09:58	0 - 4 ft	671133-002
SW07	S	08.26.2020 09:59	0 - 4 ft	671133-003
SW08	S	08.26.2020 14:20	0 - 4 ft	671133-004
SW09	S	08.26.2020 14:21	0 - 4 ft	671133-005
SW10	S	08.26.2020 14:38	0 - 5 ft	671133-006
FS10	S	08.26.2020 10:29	4 ft	671133-007
FS11	S	08.26.2020 10:31	4 ft	671133-008
FS12	S	08.26.2020 10:32	4 ft	671133-009
FS13	S	08.26.2020 10:34	4 ft	671133-010
FS14	S	08.26.2020 10:35	4 ft	671133-011
FS15	S	08.26.2020 10:37	4 ft	671133-012
FS16	S	08.26.2020 10:46	4 ft	671133-013
FS17	S	08.26.2020 10:48	4 ft	671133-014
FS18	S	08.26.2020 10:49	4 ft	671133-015



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 012919105
Work Order Number(s): 671133

Report Date: 08.31.2020
Date Received: 08.27.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 671133

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW05** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-001 Date Collected: 08.26.2020 09:56 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.8	9.94	mg/kg	08.27.2020 15:30		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.27.2020 16:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.27.2020 16:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.27.2020 16:29	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.27.2020 16:29	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.27.2020 16:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.27.2020 16:29	
o-Terphenyl	84-15-1	113	%	70-135	08.27.2020 16:29	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW05**
Lab Sample Id: 671133-001

Matrix: Soil
Date Collected: 08.26.2020 09:56

Date Received: 08.27.2020 09:08
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.27.2020 15:16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.27.2020 15:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.2020 15:16	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.27.2020 15:16	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW06** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-002 Date Collected: 08.26.2020 09:58 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.7	9.98	mg/kg	08.27.2020 15:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.27.2020 16:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.27.2020 16:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.27.2020 16:50	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.27.2020 16:50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.27.2020 16:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	08.27.2020 16:50	
o-Terphenyl	84-15-1	117	%	70-135	08.27.2020 16:50	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW06** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-002 Date Collected: 08.26.2020 09:58 Sample Depth: 0 - 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 12:08 Basis: Wet Weight
 Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 15:38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 15:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.2020 15:38		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.27.2020 15:38		



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW07** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-003 Date Collected: 08.26.2020 09:59 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.2	10.1	mg/kg	08.27.2020 15:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.27.2020 17:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.27.2020 17:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.27.2020 17:10	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.27.2020 17:10	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.27.2020 17:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	08.27.2020 17:10	
o-Terphenyl	84-15-1	116	%	70-135	08.27.2020 17:10	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW07** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-003 Date Collected: 08.26.2020 09:59 Sample Depth: 0 - 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 12:08 Basis: Wet Weight
 Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.27.2020 16:01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.27.2020 16:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.27.2020 16:01	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 16:01	



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EMSU B 865

Sample Id: **SW08** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-004 Date Collected: 08.26.2020 14:20 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	452	50.4	mg/kg	08.27.2020 15:58		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.27.2020 17:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.27.2020 17:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.27.2020 17:30	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.27.2020 17:30	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.27.2020 17:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	08.27.2020 17:30	
o-Terphenyl	84-15-1	112	%	70-135	08.27.2020 17:30	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW08**
Lab Sample Id: 671133-004

Matrix: Soil
Date Collected: 08.26.2020 14:20

Date Received: 08.27.2020 09:08
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.27.2020 16:23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.27.2020 16:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 16:23	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.2020 16:23	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW09** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-005 Date Collected: 08.26.2020 14:21 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	210	50.3	mg/kg	08.27.2020 16:04		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 09:45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 09:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 09:45	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 09:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 09:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	08.28.2020 09:45	
o-Terphenyl	84-15-1	109	%	70-135	08.28.2020 09:45	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW09**
Lab Sample Id: 671133-005

Matrix: Soil
Date Collected: 08.26.2020 14:21

Date Received: 08.27.2020 09:08
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135792

Prep Method: SW5035A

% Moisture:

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 16:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 16:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 16:46		
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.27.2020 16:46		



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EMSU B 865

Sample Id: **SW10** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-006 Date Collected: 08.26.2020 14:38 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	380	50.5	mg/kg	08.27.2020 16:20		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 10:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.28.2020 10:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 10:05	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.28.2020 10:05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.28.2020 10:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	08.28.2020 10:05	
o-Terphenyl	84-15-1	118	%	70-135	08.28.2020 10:05	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW10** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-006 Date Collected: 08.26.2020 14:38 Sample Depth: 0 - 5 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 12:08 Basis: Wet Weight
 Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 17:08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 17:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 17:08		
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.27.2020 17:08		



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EMSU B 865

Sample Id: **FS10** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-007 Date Collected: 08.26.2020 10:29 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	232	9.90	mg/kg	08.27.2020 16:26		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.27.2020 17:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.27.2020 17:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.27.2020 17:50	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.27.2020 17:50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.27.2020 17:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	08.27.2020 17:50	
o-Terphenyl	84-15-1	107	%	70-135	08.27.2020 17:50	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS10**
Lab Sample Id: 671133-007

Matrix: Soil
Date Collected: 08.26.2020 10:29

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 17:31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 17:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.27.2020 17:31	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 17:31	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS11** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-008 Date Collected: 08.26.2020 10:31 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	291	9.98	mg/kg	08.27.2020 16:32		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.27.2020 18:11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.27.2020 18:11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.27.2020 18:11	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.27.2020 18:11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.27.2020 18:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	08.27.2020 18:11	
o-Terphenyl	84-15-1	110	%	70-135	08.27.2020 18:11	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS11**
Lab Sample Id: 671133-008

Matrix: Soil
Date Collected: 08.26.2020 10:31

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.27.2020 17:53	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.27.2020 17:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 17:53	
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.27.2020 17:53	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS12** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-009 Date Collected: 08.26.2020 10:32 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	253	9.94	mg/kg	08.27.2020 16:37		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.27.2020 18:51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.27.2020 18:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.27.2020 18:51	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.27.2020 18:51	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.27.2020 18:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	08.27.2020 18:51	
o-Terphenyl	84-15-1	113	%	70-135	08.27.2020 18:51	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS12** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-009 Date Collected: 08.26.2020 10:32 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 12:08 Basis: Wet Weight
 Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 18:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 18:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.27.2020 18:16		
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 18:16		



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EMSU B 865

Sample Id: **FS13** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-010 Date Collected: 08.26.2020 10:34 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	9.98	mg/kg	08.27.2020 16:43		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.27.2020 19:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.27.2020 19:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.27.2020 19:12	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.27.2020 19:12	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.27.2020 19:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	08.27.2020 19:12	
o-Terphenyl	84-15-1	107	%	70-135	08.27.2020 19:12	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS13**
Lab Sample Id: 671133-010

Matrix: Soil
Date Collected: 08.26.2020 10:34

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.27.2020 18:38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.27.2020 18:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 18:38	
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.27.2020 18:38	



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EMSU B 865

Sample Id: **FS14** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-011 Date Collected: 08.26.2020 10:35 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	286	50.1	mg/kg	08.27.2020 16:48		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 09:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 09:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 09:24	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.28.2020 09:24	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 09:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	08.28.2020 09:24	
o-Terphenyl	84-15-1	118	%	70-135	08.28.2020 09:24	



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EMSU B 865

Sample Id: **FS14**
Lab Sample Id: 671133-011

Matrix: Soil
Date Collected: 08.26.2020 10:35

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.27.2020 19:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 19:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	08.27.2020 19:56	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.27.2020 19:56	



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Sample Id: **FS15** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-012 Date Collected: 08.26.2020 10:37 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	9.98	mg/kg	08.27.2020 17:05		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.27.2020 19:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.27.2020 19:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.27.2020 19:32	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.27.2020 19:32	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.27.2020 19:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.27.2020 19:32	
o-Terphenyl	84-15-1	114	%	70-135	08.27.2020 19:32	



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EMSU B 865

Sample Id: **FS15**
Lab Sample Id: 671133-012

Matrix: Soil
Date Collected: 08.26.2020 10:37

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.27.2020 20:19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.27.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.27.2020 20:19	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.27.2020 20:19	



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EMSU B 865

Sample Id: **FS16** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-013 Date Collected: 08.26.2020 10:46 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	76.9	9.98	mg/kg	08.27.2020 17:11		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.27.2020 19:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.27.2020 19:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.27.2020 19:52	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.27.2020 19:52	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.27.2020 19:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	08.27.2020 19:52	
o-Terphenyl	84-15-1	119	%	70-135	08.27.2020 19:52	



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EMSU B 865

Sample Id: **FS16**
Lab Sample Id: 671133-013

Matrix: Soil
Date Collected: 08.26.2020 10:46

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135792

Prep Method: SW5035A

% Moisture:

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.27.2020 20:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 20:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	08.27.2020 20:41	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.27.2020 20:41	



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EMSU B 865

Sample Id: **FS17** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-014 Date Collected: 08.26.2020 10:48 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	271	49.6	mg/kg	08.27.2020 17:27		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.27.2020 20:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.27.2020 20:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.27.2020 20:12	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.27.2020 20:12	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.27.2020 20:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	08.27.2020 20:12	
o-Terphenyl	84-15-1	113	%	70-135	08.27.2020 20:12	



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EMSU B 865

Sample Id: **FS17** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-014 Date Collected: 08.26.2020 10:48 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 12:08 Basis: Wet Weight
 Seq Number: 3135792

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.27.2020 21:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.27.2020 21:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.27.2020 21:03	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.27.2020 21:03	



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EMSU B 865

Sample Id: **FS18** Matrix: Soil Date Received: 08.27.2020 09:08
 Lab Sample Id: 671133-015 Date Collected: 08.26.2020 10:49 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.27.2020 13:26 Basis: Wet Weight
 Seq Number: 3135807

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.2	9.98	mg/kg	08.27.2020 17:33		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.27.2020 13:00 Basis: Wet Weight
 Seq Number: 3135805

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.27.2020 20:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.27.2020 20:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.27.2020 20:32	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.27.2020 20:32	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.27.2020 20:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	123	%	70-135	08.27.2020 20:32	
o-Terphenyl	84-15-1	115	%	70-135	08.27.2020 20:32	



Certificate of Analytical Results 671133

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS18**
Lab Sample Id: 671133-015

Matrix: Soil
Date Collected: 08.26.2020 10:49

Date Received: 08.27.2020 09:08
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135792

Prep Method: SW5035A

% Moisture:

Date Prep: 08.27.2020 12:08

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.27.2020 21:26	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.27.2020 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.27.2020 21:26	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.27.2020 21:26	



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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3135807

MB Sample Id: 7710281-1-BLK

Matrix: Solid

LCS Sample Id: 7710281-1-BKS

Prep Method: E300P

Date Prep: 08.27.2020

LCSD Sample Id: 7710281-1-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	265	106	90-110	1	20	mg/kg	08.27.2020 15:19	

Analytical Method: Chloride by EPA 300

Seq Number: 3135807

Parent Sample Id: 671133-001

Matrix: Soil

MS Sample Id: 671133-001 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671133-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.8	199	212	101	211	100	90-110	0	20	mg/kg	08.27.2020 15:36	

Analytical Method: Chloride by EPA 300

Seq Number: 3135807

Parent Sample Id: 671133-011

Matrix: Soil

MS Sample Id: 671133-011 S

Prep Method: E300P

Date Prep: 08.27.2020

MSD Sample Id: 671133-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	286	199	467	91	481	98	90-110	3	20	mg/kg	08.27.2020 16:54	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135805

MB Sample Id: 7710279-1-BLK

Matrix: Solid

LCS Sample Id: 7710279-1-BKS

Prep Method: SW8015P

Date Prep: 08.27.2020

LCSD Sample Id: 7710279-1-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	1000	100	964	96	70-135	4	35	mg/kg	08.27.2020 13:47	
Diesel Range Organics (DRO)	<50.0	1000	1080	108	1050	105	70-135	3	35	mg/kg	08.27.2020 13:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		127		132		70-135	%	08.27.2020 13:47
o-Terphenyl	114		127		118		70-135	%	08.27.2020 13:47

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135805

Matrix: Solid

MB Sample Id: 7710279-1-BLK

Prep Method: SW8015P

Date Prep: 08.27.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.27.2020 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



LT Environmental, Inc.

EMSU B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135805

Parent Sample Id: 671126-001

Matrix: Soil

MS Sample Id: 671126-001 S

Prep Method: SW8015P

Date Prep: 08.27.2020

MSD Sample Id: 671126-001 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	947	95	969	97	70-135	2	35	mg/kg	08.27.2020 14:47	
Diesel Range Organics (DRO)	<50.0	999	1040	104	1050	105	70-135	1	35	mg/kg	08.27.2020 14:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		134		70-135	%	08.27.2020 14:47
o-Terphenyl	124		124		70-135	%	08.27.2020 14:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135792

MB Sample Id: 7710275-1-BLK

Matrix: Solid

LCS Sample Id: 7710275-1-BKS

Prep Method: SW5035A

Date Prep: 08.27.2020

LCSD Sample Id: 7710275-1-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	0.111	111	0.105	105	70-130	6	35	mg/kg	08.27.2020 13:13	
Toluene	<0.00200	0.100	0.106	106	0.100	100	70-130	6	35	mg/kg	08.27.2020 13:13	
Ethylbenzene	<0.00200	0.100	0.0987	99	0.0936	94	71-129	5	35	mg/kg	08.27.2020 13:13	
m,p-Xylenes	<0.00400	0.200	0.200	100	0.190	95	70-135	5	35	mg/kg	08.27.2020 13:13	
o-Xylene	<0.00200	0.100	0.0983	98	0.0930	93	71-133	6	35	mg/kg	08.27.2020 13:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		100		70-130	%	08.27.2020 13:13
4-Bromofluorobenzene	89		87		87		70-130	%	08.27.2020 13:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135792

Parent Sample Id: 671133-001

Matrix: Soil

MS Sample Id: 671133-001 S

Prep Method: SW5035A

Date Prep: 08.27.2020

MSD Sample Id: 671133-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.121	120	0.119	119	70-130	2	35	mg/kg	08.27.2020 13:58	
Toluene	<0.00202	0.101	0.115	114	0.114	114	70-130	1	35	mg/kg	08.27.2020 13:58	
Ethylbenzene	<0.00202	0.101	0.104	103	0.104	104	71-129	0	35	mg/kg	08.27.2020 13:58	
m,p-Xylenes	<0.00403	0.202	0.210	104	0.211	106	70-135	0	35	mg/kg	08.27.2020 13:58	
o-Xylene	<0.00202	0.101	0.103	102	0.104	104	71-133	1	35	mg/kg	08.27.2020 13:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	08.27.2020 13:58
4-Bromofluorobenzene	88		90		70-130	%	08.27.2020 13:58

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



Chain of Custody

Work Order No: 671133

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

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Page 1 of 2

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

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

Project Name:	EMSU B 865	Turn Around	
Project Number:	012919105	Routine	✓
P.O. Number:	Lea	Rush:	
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	4.1/4.2	Thermometer ID				
Received Inact:	Yes	No	Correction Factor:			
Cooler Custody Seals:	Yes	No	Total Containers:			
Sample Custody Seals:	Yes	No	15			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	ANALYSIS REQUEST																Work Order Notes
SW05	S	8/26/2020	9:56	0-4'	1	X	X	X													Composite
SW06	S	8/26/2020	9:58	0-4'	1	X	X	X													Composite
SW07	S	8/26/2020	9:59	0-4'	1	X	X	X													Composite
SW08	S	8/26/2020	14:20	0-4'	1	X	X	X													Composite
SW09	S	8/26/2020	14:21	0-4'	1	X	X	X													Composite
SW10	S	8/26/2020	14:38	0-5'	1	X	X	X													Composite
FS10	S	8/26/2020	10:29	4'	1	X	X	X													Composite
FS11	S	8/26/2020	10:31	4'	1	X	X	X													Composite
FS12	S	8/26/2020	10:32	4'	1	X	X	X													Composite
FS13	S	8/26/2020	10:34	4'	1	X	X	X													Composite

Total 200.7 / 6010 200.8 / 6020:

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

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
 1631 / 245.1 / 7470 / 7471 : Hg

Note: 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 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
<i>[Signature]</i>	<i>[Signature]</i>	8-27-20 07:00	<i>[Signature]</i>	<i>[Signature]</i>	8-27-20 09:05



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) 291-1111
Hobbs, NM (575-392-7550)

Chain of Custody

Work Order No: 671133

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:	jmwalther@ltenv.com , dmoir@ltenv.com

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

[illegible]

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[illegible]

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Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Revised Date 051418 Rev. 2018.1

Certificate of Analysis Summary 671254



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Date Received in Lab: Fri 08.28.2020 09:54

Contact: Dan Moir

Report Date: 08.31.2020 14:20

Project Location: Lea County

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	671254-001	671254-002	671254-003	671254-004	671254-005	671254-006
	<i>Field Id:</i>	FS19	FS20	FS21	FS22	FS23	SW14
	<i>Depth:</i>	5- ft	5- ft	5- ft	5- ft	4- ft	0-4 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.27.2020 10:30	08.27.2020 10:31	08.27.2020 10:32	08.27.2020 10:33	08.27.2020 10:35	08.27.2020 14:46
BTEX by EPA 8021B	<i>Extracted:</i>	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52
	<i>Analyzed:</i>	08.28.2020 15:38	08.28.2020 16:00	08.28.2020 16:23	08.28.2020 16:45	08.28.2020 17:08	08.28.2020 17:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00396 0.00396	<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14
	<i>Analyzed:</i>	08.28.2020 13:28	08.28.2020 13:45	08.28.2020 13:51	08.28.2020 13:56	08.28.2020 14:02	08.28.2020 14:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		178 50.1	256 9.96	174 49.5	368 50.0	369 49.7	249 9.98
TPH by SW8015 Mod	<i>Extracted:</i>	08.28.2020 14:00	08.28.2020 14:00	08.28.2020 14:00	08.28.2020 14:00	08.28.2020 14:00	08.28.2020 14:00
	<i>Analyzed:</i>	08.31.2020 10:24	08.28.2020 21:10	08.31.2020 10:44	08.31.2020 11:04	08.31.2020 11:25	08.28.2020 15:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.0 50.0	<50.2 50.2
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	133 50.3	59.4 50.0	77.7 50.0	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<50.3 50.3	<50.0 50.0	<50.0 50.0	<50.2 50.2
Total GRO-DRO		<49.8 49.8	<50.0 50.0	133 50.3	59.4 50.0	77.7 50.0	<50.2 50.2
Total TPH		<49.8 49.8	<50.0 50.0	133 50.3	59.4 50.0	77.7 50.0	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 671254



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Date Received in Lab: Fri 08.28.2020 09:54

Contact: Dan Moir

Report Date: 08.31.2020 14:20

Project Location: Lea County

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671254-007	671254-008	671254-009			
	Field Id:	SW15	SW16	SW17			
	Depth:	0-4 ft	0-4 ft	0-4 ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	08.27.2020 14:41	08.27.2020 14:43	08.27.2020 14:44			
BTEX by EPA 8021B	Extracted:	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52			
	Analyzed:	08.28.2020 17:53	08.28.2020 18:15	08.28.2020 18:38			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198			
Benzene							
Toluene							
Ethylbenzene							
m,p-Xylenes							
o-Xylene							
Total Xylenes							
Total BTEX							
Chloride by EPA 300	Extracted:	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14			
	Analyzed:	08.28.2020 14:24	08.28.2020 14:30	08.28.2020 14:35			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		73.4 9.92	173 10.0	36.0 9.96			
Chloride							
TPH by SW8015 Mod	Extracted:	08.28.2020 14:00	08.28.2020 14:00	08.28.2020 14:00			
	Analyzed:	08.28.2020 15:47	08.28.2020 16:07	08.28.2020 14:12			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
		<50.1 50.1	<49.9 49.9	<49.8 49.8			
Gasoline Range Hydrocarbons (GRO)							
Diesel Range Organics (DRO)							
Motor Oil Range Hydrocarbons (MRO)							
Total GRO-DRO							
Total TPH							

BRL - Below Reporting Limit

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



Analytical Report 671254

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

012919105

08.31.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.31.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **671254**

EMSU B 865

Project Address: Lea 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 Eurofins Xenco, LLC Report Number(s) 671254. 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 Eurofins Xenco, LLC. 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. 671254 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 671254****LT Environmental, Inc., Arvada, CO**

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS19	S	08.27.2020 10:30	5 ft	671254-001
FS20	S	08.27.2020 10:31	5 ft	671254-002
FS21	S	08.27.2020 10:32	5 ft	671254-003
FS22	S	08.27.2020 10:33	5 ft	671254-004
FS23	S	08.27.2020 10:35	4 ft	671254-005
SW14	S	08.27.2020 14:46	0 - 4 ft	671254-006
SW15	S	08.27.2020 14:41	0 - 4 ft	671254-007
SW16	S	08.27.2020 14:43	0 - 4 ft	671254-008
SW17	S	08.27.2020 14:44	0 - 4 ft	671254-009



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 012919105
Work Order Number(s): 671254

Report Date: 08.31.2020
Date Received: 08.28.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3135962 TPH by SW8015 Mod

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

Samples affected are: 671254-005,671254-003.



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS19** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-001 Date Collected: 08.27.2020 10:30 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	178	50.1	mg/kg	08.28.2020 13:28		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.31.2020 10:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.31.2020 10:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.31.2020 10:24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.31.2020 10:24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.31.2020 10:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	08.31.2020 10:24	
o-Terphenyl	84-15-1	124	%	70-135	08.31.2020 10:24	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS19**
Lab Sample Id: 671254-001

Matrix: Soil
Date Collected: 08.27.2020 10:30

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.28.2020 15:38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.28.2020 15:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	84	%	70-130	08.28.2020 15:38	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.28.2020 15:38	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS20** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-002 Date Collected: 08.27.2020 10:31 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	256	9.96	mg/kg	08.28.2020 13:45		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.28.2020 21:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.28.2020 21:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.28.2020 21:10	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.28.2020 21:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.28.2020 21:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.28.2020 21:10	
o-Terphenyl	84-15-1	93	%	70-135	08.28.2020 21:10	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS20**
Lab Sample Id: 671254-002

Matrix: Soil
Date Collected: 08.27.2020 10:31

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 16:00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 16:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.28.2020 16:00	
4-Bromofluorobenzene	460-00-4	87	%	70-130	08.28.2020 16:00	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS21** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-003 Date Collected: 08.27.2020 10:32 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	174	49.5	mg/kg	08.28.2020 13:51		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.31.2020 10:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	133	50.3	mg/kg	08.31.2020 10:44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.31.2020 10:44	U	1
Total GRO-DRO	PHC628	133	50.3	mg/kg	08.31.2020 10:44		1
Total TPH	PHC635	133	50.3	mg/kg	08.31.2020 10:44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	142	%	70-135	08.31.2020 10:44	**
o-Terphenyl	84-15-1	132	%	70-135	08.31.2020 10:44	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS21**
Lab Sample Id: 671254-003

Matrix: Soil
Date Collected: 08.27.2020 10:32

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.2020 16:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 16:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.28.2020 16:23	
4-Bromofluorobenzene	460-00-4	82	%	70-130	08.28.2020 16:23	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS22** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-004 Date Collected: 08.27.2020 10:33 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	368	50.0	mg/kg	08.28.2020 13:56		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.31.2020 11:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	59.4	50.0	mg/kg	08.31.2020 11:04		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.31.2020 11:04	U	1
Total GRO-DRO	PHC628	59.4	50.0	mg/kg	08.31.2020 11:04		1
Total TPH	PHC635	59.4	50.0	mg/kg	08.31.2020 11:04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	08.31.2020 11:04	
o-Terphenyl	84-15-1	119	%	70-135	08.31.2020 11:04	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS22**
Lab Sample Id: 671254-004

Matrix: Soil
Date Collected: 08.27.2020 10:33

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.28.2020 16:45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.28.2020 16:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.28.2020 16:45	
4-Bromofluorobenzene	460-00-4	86	%	70-130	08.28.2020 16:45	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS23** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-005 Date Collected: 08.27.2020 10:35 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	369	49.7	mg/kg	08.28.2020 14:02		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.31.2020 11:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	77.7	50.0	mg/kg	08.31.2020 11:25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.31.2020 11:25	U	1
Total GRO-DRO	PHC628	77.7	50.0	mg/kg	08.31.2020 11:25		1
Total TPH	PHC635	77.7	50.0	mg/kg	08.31.2020 11:25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	136	%	70-135	08.31.2020 11:25	**
o-Terphenyl	84-15-1	125	%	70-135	08.31.2020 11:25	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS23**
Lab Sample Id: 671254-005

Matrix: Soil
Date Collected: 08.27.2020 10:35

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.28.2020 17:08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.28.2020 17:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.28.2020 17:08	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 17:08	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW14** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-006 Date Collected: 08.27.2020 14:46 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	249	9.98	mg/kg	08.28.2020 14:19		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.28.2020 15:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.28.2020 15:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.28.2020 15:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.28.2020 15:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.28.2020 15:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.28.2020 15:27	
o-Terphenyl	84-15-1	94	%	70-135	08.28.2020 15:27	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW14**
Lab Sample Id: 671254-006

Matrix: Soil
Date Collected: 08.27.2020 14:46

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 17:30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 17:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.28.2020 17:30		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.28.2020 17:30		



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW15** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-007 Date Collected: 08.27.2020 14:41 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.4	9.92	mg/kg	08.28.2020 14:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.28.2020 15:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.28.2020 15:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.28.2020 15:47	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.28.2020 15:47	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.28.2020 15:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.28.2020 15:47	
o-Terphenyl	84-15-1	95	%	70-135	08.28.2020 15:47	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW15**
Lab Sample Id: 671254-007

Matrix: Soil
Date Collected: 08.27.2020 14:41

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.28.2020 17:53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 17:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.28.2020 17:53	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.28.2020 17:53	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW16** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-008 Date Collected: 08.27.2020 14:43 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	173	10.0	mg/kg	08.28.2020 14:30		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 16:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 16:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 16:07	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 16:07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 16:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.28.2020 16:07	
o-Terphenyl	84-15-1	91	%	70-135	08.28.2020 16:07	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW16**
Lab Sample Id: 671254-008

Matrix: Soil
Date Collected: 08.27.2020 14:43

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 18:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 18:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 18:15	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.28.2020 18:15	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW17** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671254-009 Date Collected: 08.27.2020 14:44 Sample Depth: 0 - 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	36.0	9.96	mg/kg	08.28.2020 14:35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 14:00 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 14:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.28.2020 14:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 14:12	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.28.2020 14:12	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.28.2020 14:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.28.2020 14:12	
o-Terphenyl	84-15-1	92	%	70-135	08.28.2020 14:12	



Certificate of Analytical Results 671254

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW17**
Lab Sample Id: 671254-009

Matrix: Soil
Date Collected: 08.27.2020 14:44

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: MAB

Analyst: MAB

Seq Number: 3135887

Prep Method: SW5035A

% Moisture:

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	08.28.2020 18:38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.28.2020 18:38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 18:38		
4-Bromofluorobenzene	460-00-4	85	%	70-130	08.28.2020 18:38		



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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

MB Sample Id: 7710389-1-BLK

Matrix: Solid

LCS Sample Id: 7710389-1-BKS

Prep Method: E300P

Date Prep: 08.28.2020

LCSD Sample Id: 7710389-1-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	265	106	90-110	1	20	mg/kg	08.28.2020 13:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

Parent Sample Id: 671254-001

Matrix: Soil

MS Sample Id: 671254-001 S

Prep Method: E300P

Date Prep: 08.28.2020

MSD Sample Id: 671254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	178	200	375	99	379	100	90-110	1	20	mg/kg	08.28.2020 13:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

Parent Sample Id: 671257-002

Matrix: Soil

MS Sample Id: 671257-002 S

Prep Method: E300P

Date Prep: 08.28.2020

MSD Sample Id: 671257-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	309	201	493	92	489	90	90-110	1	20	mg/kg	08.28.2020 14:52	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

MB Sample Id: 7710484-1-BLK

Matrix: Solid

LCS Sample Id: 7710484-1-BKS

Prep Method: SW8015P

Date Prep: 08.28.2020

LCSD Sample Id: 7710484-1-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	820	82	806	81	70-135	2	35	mg/kg	08.28.2020 13:32	
Diesel Range Organics (DRO)	<50.0	1000	753	75	744	74	70-135	1	35	mg/kg	08.28.2020 13:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		98		92		70-135	%	08.28.2020 13:32
o-Terphenyl	84		95		89		70-135	%	08.28.2020 13:32

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

Matrix: Solid

MB Sample Id: 7710484-1-BLK

Prep Method: SW8015P

Date Prep: 08.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 13:12	

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

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

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

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



LT Environmental, Inc.

EMSU B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

Parent Sample Id: 671254-009

Matrix: Soil

MS Sample Id: 671254-009 S

Prep Method: SW8015P

Date Prep: 08.28.2020

MSD Sample Id: 671254-009 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	882	88	832	84	70-135	6	35	mg/kg	08.28.2020 14:32	
Diesel Range Organics (DRO)	<50.0	999	983	98	936	94	70-135	5	35	mg/kg	08.28.2020 14:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	131		129		70-135	%	08.28.2020 14:32
o-Terphenyl	128		127		70-135	%	08.28.2020 14:32

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135887

MB Sample Id: 7710384-1-BLK

Matrix: Solid

LCS Sample Id: 7710384-1-BKS

Prep Method: SW5035A

Date Prep: 08.28.2020

LCSD Sample Id: 7710384-1-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	0.108	108	0.109	109	70-130	1	35	mg/kg	08.28.2020 13:34	
Toluene	<0.00200	0.100	0.104	104	0.105	105	70-130	1	35	mg/kg	08.28.2020 13:34	
Ethylbenzene	<0.00200	0.100	0.0977	98	0.0984	98	71-129	1	35	mg/kg	08.28.2020 13:34	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.199	100	70-135	1	35	mg/kg	08.28.2020 13:34	
o-Xylene	<0.00200	0.100	0.0961	96	0.0973	97	71-133	1	35	mg/kg	08.28.2020 13:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		99		70-130	%	08.28.2020 13:34
4-Bromofluorobenzene	90		93		87		70-130	%	08.28.2020 13:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135887

Parent Sample Id: 671254-001

Matrix: Soil

MS Sample Id: 671254-001 S

Prep Method: SW5035A

Date Prep: 08.28.2020

MSD Sample Id: 671254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.110	111	0.102	103	70-130	8	35	mg/kg	08.28.2020 14:19	
Toluene	<0.00199	0.0994	0.0987	99	0.0929	93	70-130	6	35	mg/kg	08.28.2020 14:19	
Ethylbenzene	<0.00199	0.0994	0.0799	80	0.0780	78	71-129	2	35	mg/kg	08.28.2020 14:19	
m,p-Xylenes	<0.00398	0.199	0.158	79	0.155	78	70-135	2	35	mg/kg	08.28.2020 14:19	
o-Xylene	<0.00199	0.0994	0.0783	79	0.0769	77	71-133	2	35	mg/kg	08.28.2020 14:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	08.28.2020 14:19
4-Bromofluorobenzene	87		87		70-130	%	08.28.2020 14:19

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$
 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: 671254

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

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Page 1 of 1

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

Project Name:	EMSU B 865	Turn Around	
Project Number:	012919105	Routine	☐
P.O. Number:	Lee	Rush:	<u>24hr</u>
Sampler's Name:	William Mather	Due Date:	

SAMPLE RECEIPT	Temp Blank:	☒ Yes ☐ No	Wet Ice:	☒ Yes ☐ No
	Temperature (°C):	3.2 / 3.6	Thermometer ID	
	Received Intact:	☒ Yes ☐ No	Correction Factor:	-0.2
	Cooler Custody Seals:	Yes ☐ No ☒	Total Containers:	9
	Sample Custody Seals:	Yes ☐ No ☒		

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride	lab, if received by 4:30pm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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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

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
<i>[Signature]</i>	<i>Che Li Fan</i>	8/28/2020 09:54			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.28.2020 09.54.00 AM

Work Order #: 671254

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.28.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.31.2020

Certificate of Analysis Summary 671257



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Fri 08.28.2020 09:54

Report Date: 08.31.2020 14:31

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671257-001	671257-002	671257-003	671257-004	671257-005	671257-006
	Field Id:	SW11	SW12	SW13	FS24	FS25	FS26
	Depth:	0-5 ft	0-5 ft	0-5 ft	4- ft	4- ft	5- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	08.27.2020 10:13	08.27.2020 10:14	08.27.2020 11:44	08.27.2020 10:36	08.27.2020 10:37	08.27.2020 11:45
BTEX by EPA 8021B	Extracted:	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52
	Analyzed:	08.28.2020 19:00	08.28.2020 20:19	08.28.2020 20:41	08.28.2020 21:03	08.28.2020 21:26	08.28.2020 21:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00399 0.00399	<0.00397 0.00397	<0.00398 0.00398	<0.00398 0.00398	<0.00398 0.00398	<0.00397 0.00397
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300	Extracted:	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14
	Analyzed:	08.28.2020 14:41	08.28.2020 14:47	08.28.2020 15:03	08.28.2020 15:09	08.28.2020 15:26	08.28.2020 15:31
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		270 49.9	309 50.1	206 50.5	393 10.0	221 49.9	193 10.0
TPH by SW8015 Mod	Extracted:	08.28.2020 16:15	08.28.2020 17:00	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15
	Analyzed:	08.28.2020 16:27	08.28.2020 21:10	08.28.2020 16:47	08.28.2020 21:30	08.28.2020 21:50	08.28.2020 17:08
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.3 50.3	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.3 50.3
Diesel Range Organics (DRO)		<50.2 50.2	<50.3 50.3	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.3 50.3	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.3 50.3
Total GRO-DRO		<50.2 50.2	<50.3 50.3	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.3 50.3
Total TPH		<50.2 50.2	<50.3 50.3	<50.1 50.1	<49.9 49.9	<50.1 50.1	<50.3 50.3

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 671257



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Fri 08.28.2020 09:54

Report Date: 08.31.2020 14:31

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	671257-007	671257-008	671257-009	671257-010	671257-011	671257-012
	<i>Field Id:</i>	FS27	FS28	FS29	FS30	FS31	FS32
	<i>Depth:</i>	5- ft	4- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.27.2020 11:46	08.27.2020 15:05	08.27.2020 15:06	08.27.2020 15:07	08.27.2020 15:09	08.27.2020 15:10
BTEX by EPA 8021B	<i>Extracted:</i>	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 11:52	08.28.2020 16:51
	<i>Analyzed:</i>	08.28.2020 22:11	08.28.2020 22:33	08.28.2020 22:56	08.28.2020 23:18	08.28.2020 23:41	08.28.2020 21:04
	<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	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00403 0.00403	<0.00401 0.00401	<0.00402 0.00402	<0.00401 0.00401	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 13:14	08.28.2020 15:05
	<i>Analyzed:</i>	08.28.2020 15:37	08.28.2020 15:42	08.28.2020 15:48	08.28.2020 15:53	08.28.2020 15:59	08.28.2020 18:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		55.3 50.2	236 50.2	37.8 10.0	22.3 10.1	116 9.98	245 10.0
TPH by SW8015 Mod	<i>Extracted:</i>	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15	08.28.2020 16:15
	<i>Analyzed:</i>	08.28.2020 17:28	08.28.2020 17:48	08.28.2020 18:08	08.28.2020 19:09	08.28.2020 19:29	08.28.2020 18:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.1 50.1	<49.9 49.9
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.1 50.1	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.1 50.1	<49.9 49.9
Total GRO-DRO		<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.1 50.1	<49.9 49.9
Total TPH		<49.9 49.9	<49.8 49.8	<49.9 49.9	<49.9 49.9	<50.1 50.1	<49.9 49.9

BRL - Below Reporting Limit

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



Analytical Report 671257

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

012919105

08.31.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.31.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **671257**

EMSU B 865

Project Address: Lea 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 Eurofins Xenco, LLC Report Number(s) 671257. 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 Eurofins Xenco, LLC. 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. 671257 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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

**Sample Cross Reference 671257****LT Environmental, Inc., Arvada, CO**

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW11	S	08.27.2020 10:13	0 - 5 ft	671257-001
SW12	S	08.27.2020 10:14	0 - 5 ft	671257-002
SW13	S	08.27.2020 11:44	0 - 5 ft	671257-003
FS24	S	08.27.2020 10:36	4 ft	671257-004
FS25	S	08.27.2020 10:37	4 ft	671257-005
FS26	S	08.27.2020 11:45	5 ft	671257-006
FS27	S	08.27.2020 11:46	5 ft	671257-007
FS28	S	08.27.2020 15:05	4 ft	671257-008
FS29	S	08.27.2020 15:06	4 ft	671257-009
FS30	S	08.27.2020 15:07	4 ft	671257-010
FS31	S	08.27.2020 15:09	4 ft	671257-011
FS32	S	08.27.2020 15:10	4 ft	671257-012



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 012919105
Work Order Number(s): 671257

Report Date: 08.31.2020
Date Received: 08.28.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3135936 TPH by SW8015 Mod

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

Samples affected are: 671316-015 S, 671316-015 SD.



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW11** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-001 Date Collected: 08.27.2020 10:13 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	270	49.9	mg/kg	08.28.2020 14:41		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	08.28.2020 16:27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	08.28.2020 16:27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	08.28.2020 16:27	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	08.28.2020 16:27	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	08.28.2020 16:27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.28.2020 16:27	
o-Terphenyl	84-15-1	87	%	70-135	08.28.2020 16:27	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW11**
Lab Sample Id: 671257-001

Matrix: Soil
Date Collected: 08.27.2020 10:13

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.28.2020 19:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 19:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 19:00	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.28.2020 19:00	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW12** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-002 Date Collected: 08.27.2020 10:14 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	309	50.1	mg/kg	08.28.2020 14:47		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 17:00 Basis: Wet Weight
 Seq Number: 3135936

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.28.2020 21:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.28.2020 21:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.28.2020 21:10	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.28.2020 21:10	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.28.2020 21:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.28.2020 21:10	
o-Terphenyl	84-15-1	95	%	70-135	08.28.2020 21:10	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW12**
Lab Sample Id: 671257-002

Matrix: Soil
Date Collected: 08.27.2020 10:14

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.28.2020 20:19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.28.2020 20:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.28.2020 20:19	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.28.2020 20:19	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW13** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-003 Date Collected: 08.27.2020 11:44 Sample Depth: 0 - 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	206	50.5	mg/kg	08.28.2020 15:03		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.28.2020 16:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.28.2020 16:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.28.2020 16:47	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.28.2020 16:47	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.28.2020 16:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.28.2020 16:47	
o-Terphenyl	84-15-1	87	%	70-135	08.28.2020 16:47	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **SW13**
Lab Sample Id: 671257-003

Matrix: Soil
Date Collected: 08.27.2020 11:44

Date Received: 08.28.2020 09:54
Sample Depth: 0 - 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 20:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 20:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.28.2020 20:41	
4-Bromofluorobenzene	460-00-4	75	%	70-130	08.28.2020 20:41	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS24** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-004 Date Collected: 08.27.2020 10:36 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	393	10.0	mg/kg	08.28.2020 15:09		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 21:30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 21:30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 21:30	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 21:30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 21:30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.28.2020 21:30	
o-Terphenyl	84-15-1	94	%	70-135	08.28.2020 21:30	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS24**
Lab Sample Id: 671257-004

Matrix: Soil
Date Collected: 08.27.2020 10:36

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 21:03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 21:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87	%	70-130	08.28.2020 21:03	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.28.2020 21:03	



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EMSU B 865

Sample Id: **FS25** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-005 Date Collected: 08.27.2020 10:37 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	49.9	mg/kg	08.28.2020 15:26		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.28.2020 21:50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.28.2020 21:50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.28.2020 21:50	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.28.2020 21:50	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.28.2020 21:50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.28.2020 21:50	
o-Terphenyl	84-15-1	92	%	70-135	08.28.2020 21:50	



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LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS25**
Lab Sample Id: 671257-005

Matrix: Soil
Date Collected: 08.27.2020 10:37

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 21:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 21:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.28.2020 21:26	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.28.2020 21:26	



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EMSU B 865

Sample Id: **FS26** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-006 Date Collected: 08.27.2020 11:45 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	193	10.0	mg/kg	08.28.2020 15:31		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	08.28.2020 17:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	08.28.2020 17:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	08.28.2020 17:08	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	08.28.2020 17:08	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	08.28.2020 17:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.28.2020 17:08	
o-Terphenyl	84-15-1	90	%	70-135	08.28.2020 17:08	



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EMSU B 865

Sample Id: **FS26**
Lab Sample Id: 671257-006

Matrix: Soil
Date Collected: 08.27.2020 11:45

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.28.2020 21:48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.28.2020 21:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.28.2020 21:48	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 21:48	



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Sample Id: **FS27** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-007 Date Collected: 08.27.2020 11:46 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	55.3	50.2	mg/kg	08.28.2020 15:37		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 17:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 17:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 17:28	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 17:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 17:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.28.2020 17:28	
o-Terphenyl	84-15-1	89	%	70-135	08.28.2020 17:28	



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EMSU B 865

Sample Id: **FS27**
Lab Sample Id: 671257-007

Matrix: Soil
Date Collected: 08.27.2020 11:46

Date Received: 08.28.2020 09:54
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.2020 22:11	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.2020 22:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.28.2020 22:11	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.28.2020 22:11	



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Sample Id: **FS28** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-008 Date Collected: 08.27.2020 15:05 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	50.2	mg/kg	08.28.2020 15:42		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.28.2020 17:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.28.2020 17:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.28.2020 17:48	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	08.28.2020 17:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.28.2020 17:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	08.28.2020 17:48	
o-Terphenyl	84-15-1	92	%	70-135	08.28.2020 17:48	



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EMSU B 865

Sample Id: **FS28**
Lab Sample Id: 671257-008

Matrix: Soil
Date Collected: 08.27.2020 15:05

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.28.2020 22:33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.28.2020 22:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	08.28.2020 22:33		
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.28.2020 22:33		



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Sample Id: **FS29** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-009 Date Collected: 08.27.2020 15:06 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	37.8	10.0	mg/kg	08.28.2020 15:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 18:08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 18:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 18:08	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 18:08	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 18:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.28.2020 18:08	
o-Terphenyl	84-15-1	96	%	70-135	08.28.2020 18:08	



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Sample Id: **FS29**
Lab Sample Id: 671257-009

Matrix: Soil
Date Collected: 08.27.2020 15:06

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.2020 22:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 22:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 22:56	
4-Bromofluorobenzene	460-00-4	90	%	70-130	08.28.2020 22:56	



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Sample Id: **FS30** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-010 Date Collected: 08.27.2020 15:07 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.3	10.1	mg/kg	08.28.2020 15:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 19:09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 19:09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 19:09	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 19:09	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 19:09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.28.2020 19:09	
o-Terphenyl	84-15-1	99	%	70-135	08.28.2020 19:09	



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EMSU B 865

Sample Id: **FS30**
Lab Sample Id: 671257-010

Matrix: Soil
Date Collected: 08.27.2020 15:07

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.28.2020 23:18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.28.2020 23:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.28.2020 23:18	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.28.2020 23:18	



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EMSU B 865

Sample Id: **FS31** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-011 Date Collected: 08.27.2020 15:09 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 13:14 Basis: Wet Weight
 Seq Number: 3135890

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	9.98	mg/kg	08.28.2020 15:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	08.28.2020 19:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	08.28.2020 19:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	08.28.2020 19:29	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	08.28.2020 19:29	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	08.28.2020 19:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.28.2020 19:29	
o-Terphenyl	84-15-1	95	%	70-135	08.28.2020 19:29	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS31**
Lab Sample Id: 671257-011

Matrix: Soil
Date Collected: 08.27.2020 15:09

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 11:52

Basis: Wet Weight

Seq Number: 3135887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.2020 23:41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 23:41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.28.2020 23:41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.28.2020 23:41	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS32** Matrix: Soil Date Received: 08.28.2020 09:54
 Lab Sample Id: 671257-012 Date Collected: 08.27.2020 15:10 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.28.2020 15:05 Basis: Wet Weight
 Seq Number: 3135891

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	245	10.0	mg/kg	08.28.2020 18:42		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.28.2020 16:15 Basis: Wet Weight
 Seq Number: 3135962

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.28.2020 18:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.28.2020 18:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.28.2020 18:49	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	08.28.2020 18:49	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.28.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.28.2020 18:49	
o-Terphenyl	84-15-1	96	%	70-135	08.28.2020 18:49	



Certificate of Analytical Results 671257

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS32**
Lab Sample Id: 671257-012

Matrix: Soil
Date Collected: 08.27.2020 15:10

Date Received: 08.28.2020 09:54
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.28.2020 16:51

Basis: Wet Weight

Seq Number: 3135888

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.2020 21:04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.2020 21:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.28.2020 21:04	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.28.2020 21:04	



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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

MB Sample Id: 7710389-1-BLK

Matrix: Solid

LCS Sample Id: 7710389-1-BKS

Prep Method: E300P

Date Prep: 08.28.2020

LCSD Sample Id: 7710389-1-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	265	106	90-110	1	20	mg/kg	08.28.2020 13:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3135891

MB Sample Id: 7710431-1-BLK

Matrix: Solid

LCS Sample Id: 7710431-1-BKS

Prep Method: E300P

Date Prep: 08.28.2020

LCSD Sample Id: 7710431-1-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	263	105	266	106	90-110	1	20	mg/kg	08.28.2020 18:31	

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

Parent Sample Id: 671254-001

Matrix: Soil

MS Sample Id: 671254-001 S

Prep Method: E300P

Date Prep: 08.28.2020

MSD Sample Id: 671254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	178	200	375	99	379	100	90-110	1	20	mg/kg	08.28.2020 13:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3135890

Parent Sample Id: 671257-002

Matrix: Soil

MS Sample Id: 671257-002 S

Prep Method: E300P

Date Prep: 08.28.2020

MSD Sample Id: 671257-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	309	201	493	92	489	90	90-110	1	20	mg/kg	08.28.2020 14:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3135891

Parent Sample Id: 671316-004

Matrix: Soil

MS Sample Id: 671316-004 S

Prep Method: E300P

Date Prep: 08.28.2020

MSD Sample Id: 671316-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6480	200	6690	105	6690	104	90-110	0	20	mg/kg	08.28.2020 20:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3135891

Parent Sample Id: 671257-012

Matrix: Soil

MS Sample Id: 671257-012 S

Prep Method: E300P

Date Prep: 08.28.2020

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chloride	245	201	447	100	90-110	mg/kg	08.28.2020 18:48	

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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

MB Sample Id: 7710484-1-BLK

Matrix: Solid

LCS Sample Id: 7710484-1-BKS

Prep Method: SW8015P

Date Prep: 08.28.2020

LCSD Sample Id: 7710484-1-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	820	82	806	81	70-135	2	35	mg/kg	08.28.2020 13:32	
Diesel Range Organics (DRO)	<50.0	1000	753	75	744	74	70-135	1	35	mg/kg	08.28.2020 13:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	80		98		92		70-135	%	08.28.2020 13:32
o-Terphenyl	84		95		89		70-135	%	08.28.2020 13:32

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135936

MB Sample Id: 7710466-1-BLK

Matrix: Solid

LCS Sample Id: 7710466-1-BKS

Prep Method: SW8015P

Date Prep: 08.28.2020

LCSD Sample Id: 7710466-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1080	108	1040	104	70-135	4	35	mg/kg	08.28.2020 17:48	
Diesel Range Organics (DRO)	<50.0	1000	871	87	824	82	70-135	6	35	mg/kg	08.28.2020 17:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		129		117		70-135	%	08.28.2020 17:48
o-Terphenyl	80		95		86		70-135	%	08.28.2020 17:48

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

Matrix: Solid

MB Sample Id: 7710484-1-BLK

Prep Method: SW8015P

Date Prep: 08.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 13:12	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135936

Matrix: Solid

MB Sample Id: 7710466-1-BLK

Prep Method: SW8015P

Date Prep: 08.28.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.28.2020 17:28	

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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135962

Parent Sample Id: 671254-009

Matrix: Soil

MS Sample Id: 671254-009 S

Prep Method: SW8015P

Date Prep: 08.28.2020

MSD Sample Id: 671254-009 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	882	88	832	84	70-135	6	35	mg/kg	08.28.2020 14:32	
Diesel Range Organics (DRO)	<50.0	999	983	98	936	94	70-135	5	35	mg/kg	08.28.2020 14:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	131		129		70-135	%	08.28.2020 14:32
o-Terphenyl	128		127		70-135	%	08.28.2020 14:32

Analytical Method: TPH by SW8015 Mod

Seq Number: 3135936

Parent Sample Id: 671316-015

Matrix: Soil

MS Sample Id: 671316-015 S

Prep Method: SW8015P

Date Prep: 08.28.2020

MSD Sample Id: 671316-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	1060	107	1200	120	70-135	12	35	mg/kg	08.28.2020 18:49	
Diesel Range Organics (DRO)	<49.8	995	863	87	847	85	70-135	2	35	mg/kg	08.28.2020 18:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	138	**	138	**	70-135	%	08.28.2020 18:49
o-Terphenyl	106		111		70-135	%	08.28.2020 18:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135887

MB Sample Id: 7710384-1-BLK

Matrix: Solid

LCS Sample Id: 7710384-1-BKS

Prep Method: SW5035A

Date Prep: 08.28.2020

LCSD Sample Id: 7710384-1-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	0.108	108	0.109	109	70-130	1	35	mg/kg	08.28.2020 13:34	
Toluene	<0.00200	0.100	0.104	104	0.105	105	70-130	1	35	mg/kg	08.28.2020 13:34	
Ethylbenzene	<0.00200	0.100	0.0977	98	0.0984	98	71-129	1	35	mg/kg	08.28.2020 13:34	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.199	100	70-135	1	35	mg/kg	08.28.2020 13:34	
o-Xylene	<0.00200	0.100	0.0961	96	0.0973	97	71-133	1	35	mg/kg	08.28.2020 13:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		99		70-130	%	08.28.2020 13:34
4-Bromofluorobenzene	90		93		87		70-130	%	08.28.2020 13:34

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 B 865

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135888

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.28.2020

MB Sample Id: 7710427-1-BLK

LCS Sample Id: 7710427-1-BKS

LCSD Sample Id: 7710427-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.100	100	0.105	105	70-130	5	35	mg/kg	08.28.2020 18:47	
Toluene	<0.00200	0.100	0.0951	95	0.0987	99	70-130	4	35	mg/kg	08.28.2020 18:47	
Ethylbenzene	<0.00200	0.100	0.0996	100	0.104	104	71-129	4	35	mg/kg	08.28.2020 18:47	
m,p-Xylenes	<0.00400	0.200	0.202	101	0.212	106	70-135	5	35	mg/kg	08.28.2020 18:47	
o-Xylene	<0.00200	0.100	0.102	102	0.105	105	71-133	3	35	mg/kg	08.28.2020 18:47	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		96		101		70-130	%	08.28.2020 18:47
4-Bromofluorobenzene	103		99		100		70-130	%	08.28.2020 18:47

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135887

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.28.2020

Parent Sample Id: 671254-001

MS Sample Id: 671254-001 S

MSD Sample Id: 671254-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.110	111	0.102	103	70-130	8	35	mg/kg	08.28.2020 14:19	
Toluene	<0.00199	0.0994	0.0987	99	0.0929	93	70-130	6	35	mg/kg	08.28.2020 14:19	
Ethylbenzene	<0.00199	0.0994	0.0799	80	0.0780	78	71-129	2	35	mg/kg	08.28.2020 14:19	
m,p-Xylenes	<0.00398	0.199	0.158	79	0.155	78	70-135	2	35	mg/kg	08.28.2020 14:19	
o-Xylene	<0.00199	0.0994	0.0783	79	0.0769	77	71-133	2	35	mg/kg	08.28.2020 14:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	08.28.2020 14:19
4-Bromofluorobenzene	87		87		70-130	%	08.28.2020 14:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3135888

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.28.2020

Parent Sample Id: 671257-012

MS Sample Id: 671257-012 S

MSD Sample Id: 671257-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0919	91	0.101	101	70-130	9	35	mg/kg	08.28.2020 19:48	
Toluene	<0.00201	0.101	0.0866	86	0.0954	95	70-130	10	35	mg/kg	08.28.2020 19:48	
Ethylbenzene	<0.00201	0.101	0.0913	90	0.0987	99	71-129	8	35	mg/kg	08.28.2020 19:48	
m,p-Xylenes	<0.00402	0.201	0.185	92	0.204	101	70-135	10	35	mg/kg	08.28.2020 19:48	
o-Xylene	<0.00201	0.101	0.0892	88	0.0991	99	71-133	11	35	mg/kg	08.28.2020 19:48	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		70-130	%	08.28.2020 19:48
4-Bromofluorobenzene	97		102		70-130	%	08.28.2020 19:48

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: 671257

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

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

Project Name:	EMS B 865	Turn Around	
Project Number:	012919105	Routine	
P.O. Number:	Lee	Rush:	
Sampler's Name:	William Mather	Due Date:	

Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	3.2 / 3.0	Thermometer ID			
Received Intact:	Yes	No	T-NM-003		
Cooler Custody Seals:	Yes	No	Correction Factor:	-0.2	
Sample Custody Seals:	Yes	No	Total Containers:	12	

Sample Identification					Matrix	Date Sampled	Time Sampled	Depth	Number	TPH (EPA)	BTEX (EPA)	Chloride																	Sample Comments	lab, if received by 4:30pm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
SW11					S	8/27/2020	10:13	0-5'	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
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

Note: 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 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 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
<i>[Signature]</i>	<i>Cle Cifra</i>	8/28/2020 09:54			



Work Order No: 671257

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 (813-889-8800)

Page 2 of 2

Work Order Comments									
Program: UST/PST		☐ RP	☐ Trownfields	☐ RC	☐ \$perfund				
State of Project:									
Reporting: Level II	☐ Level III	☐ ST/UST	☐ RP	☐ Level IV					
Deliverables: EDD	☐	ADAPT	☐	Other:					

[illegible][illegible][illegible][illegible]

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

TCLP / SPLP 6010:	8RCRA	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn

Signature of the document sent to you: 1631 / 245.1 / 7470 / 7471 : Ho

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.

Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	8-28 09:54			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.28.2020 09.54.00 AM

Work Order #: 671257

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : t_NM007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	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

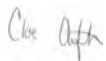
Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 08.28.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.31.2020

Certificate of Analysis Summary 671435



LT Environmental, Inc., Arvada, CO

Project Name: EMSU B 865

Project Id: 012919105

Contact: Dan Moir

Project Location: Lea County

Date Received in Lab: Mon 08.31.2020 16:23

Report Date: 09.01.2020 11:30

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	671435-001					
	Field Id:	FS21					
	Depth:	5- ft					
	Matrix:	SOIL					
	Sampled:	08.31.2020 14:05					
BTEX by EPA 8021B	Extracted:	08.31.2020 17:32					
	Analyzed:	08.31.2020 21:32					
	Units/RL:	mg/kg RL					
Benzene		<0.00199 0.00199					
Toluene		<0.00199 0.00199					
Ethylbenzene		<0.00199 0.00199					
m,p-Xylenes		<0.00398 0.00398					
o-Xylene		<0.00199 0.00199					
Total Xylenes		<0.00199 0.00199					
Total BTEX		<0.00199 0.00199					
Chloride by EPA 300	Extracted:	08.31.2020 17:05					
	Analyzed:	08.31.2020 19:07					
	Units/RL:	mg/kg RL					
Chloride		329 49.9					
TPH by SW8015 Mod	Extracted:	08.31.2020 17:15					
	Analyzed:	08.31.2020 18:01					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0					
Diesel Range Organics (DRO)		<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					
Total GRO-DRO		<50.0 50.0					
Total TPH		<50.0 50.0					

BRL - Below Reporting Limit

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



Analytical Report 671435

for

LT Environmental, Inc.

Project Manager: Dan Moir

EMSU B 865

012919105

09.01.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-37), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.01.2020

Project Manager: **Dan Moir**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: Eurofins Xenco, LLC Report No(s): **671435**

EMSU B 865

Project Address: Lea 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 Eurofins Xenco, LLC Report Number(s) 671435. 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 Eurofins Xenco, LLC. 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. 671435 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 Eurofins Xenco, LLC 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

A Small Business and Minority Company

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



Sample Cross Reference 671435

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS21	S	08.31.2020 14:05	5 ft	671435-001



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EMSU B 865

Project ID: 012919105
Work Order Number(s): 671435

Report Date: 09.01.2020
Date Received: 08.31.2020

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 671435

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS21** Matrix: Soil Date Received: 08.31.2020 16:23
 Lab Sample Id: 671435-001 Date Collected: 08.31.2020 14:05 Sample Depth: 5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.31.2020 17:05 Basis: Wet Weight
 Seq Number: 3136036

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	329	49.9	mg/kg	08.31.2020 19:07		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.31.2020 17:15 Basis: Wet Weight
 Seq Number: 3136042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.31.2020 18:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.31.2020 18:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.31.2020 18:01	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.31.2020 18:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.31.2020 18:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	08.31.2020 18:01	
o-Terphenyl	84-15-1	103	%	70-135	08.31.2020 18:01	



Certificate of Analytical Results 671435

LT Environmental, Inc., Arvada, CO

EMSU B 865

Sample Id: **FS21**
Lab Sample Id: 671435-001

Matrix: Soil
Date Collected: 08.31.2020 14:05

Date Received: 08.31.2020 16:23
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 08.31.2020 17:32

Basis: Wet Weight

Seq Number: 3136040

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.31.2020 21:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.31.2020 21:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.31.2020 21:32		
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.31.2020 21:32		



Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **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 B 865

Analytical Method: Chloride by EPA 300

Seq Number: 3136036

MB Sample Id: 7710556-1-BLK

Matrix: Solid

LCS Sample Id: 7710556-1-BKS

Prep Method: E300P

Date Prep: 08.31.2020

LCSD Sample Id: 7710556-1-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	266	106	269	108	90-110	1	20	mg/kg	08.31.2020 18:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3136036

Parent Sample Id: 671432-001

Matrix: Soil

MS Sample Id: 671432-001 S

Prep Method: E300P

Date Prep: 08.31.2020

MSD Sample Id: 671432-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3.70	200	204	100	204	100	90-110	0	20	mg/kg	08.31.2020 18:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3136036

Parent Sample Id: 671436-006

Matrix: Soil

MS Sample Id: 671436-006 S

Prep Method: E300P

Date Prep: 08.31.2020

MSD Sample Id: 671436-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2420	200	2610	95	2600	90	90-110	0	20	mg/kg	08.31.2020 19:58	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136042

MB Sample Id: 7710558-1-BLK

Matrix: Solid

LCS Sample Id: 7710558-1-BKS

Prep Method: SW8015P

Date Prep: 08.31.2020

LCSD Sample Id: 7710558-1-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	902	90	889	89	70-135	1	35	mg/kg	08.31.2020 13:35	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	1020	102	70-135	0	35	mg/kg	08.31.2020 13:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	72		122		118		70-135	%	08.31.2020 13:35
o-Terphenyl	74		117		116		70-135	%	08.31.2020 13:35

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136042

Matrix: Solid

MB Sample Id: 7710558-1-BLK

Prep Method: SW8015P

Date Prep: 08.31.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.31.2020 13:15	

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 B 865

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136042

Parent Sample Id: 671408-001

Matrix: Soil

MS Sample Id: 671408-001 S

Prep Method: SW8015P

Date Prep: 08.31.2020

MSD Sample Id: 671408-001 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	937	94	886	89	70-135	6	35	mg/kg	08.31.2020 16:16	
Diesel Range Organics (DRO)	<50.0	999	1050	105	1010	101	70-135	4	35	mg/kg	08.31.2020 16:16	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		118		70-135	%	08.31.2020 16:16
o-Terphenyl	126		115		70-135	%	08.31.2020 16:16

Analytical Method: BTEX by EPA 8021B

Seq Number: 3136040

MB Sample Id: 7710552-1-BLK

Matrix: Solid

LCS Sample Id: 7710552-1-BKS

Prep Method: SW5035A

Date Prep: 08.31.2020

LCSD Sample Id: 7710552-1-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	0.0976	98	0.100	100	70-130	2	35	mg/kg	08.31.2020 18:13	
Toluene	<0.00200	0.100	0.0931	93	0.0981	98	70-130	5	35	mg/kg	08.31.2020 18:13	
Ethylbenzene	<0.00200	0.100	0.0979	98	0.0978	98	71-129	0	35	mg/kg	08.31.2020 18:13	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.200	100	70-135	2	35	mg/kg	08.31.2020 18:13	
o-Xylene	<0.00200	0.100	0.0972	97	0.103	103	71-133	6	35	mg/kg	08.31.2020 18:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		96		94		70-130	%	08.31.2020 18:13
4-Bromofluorobenzene	110		91		101		70-130	%	08.31.2020 18:13

Analytical Method: BTEX by EPA 8021B

Seq Number: 3136040

Parent Sample Id: 671432-001

Matrix: Soil

MS Sample Id: 671432-001 S

Prep Method: SW5035A

Date Prep: 08.31.2020

MSD Sample Id: 671432-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.106	106	0.115	115	70-130	8	35	mg/kg	08.31.2020 18:54	
Toluene	<0.00200	0.100	0.0999	100	0.107	107	70-130	7	35	mg/kg	08.31.2020 18:54	
Ethylbenzene	<0.00200	0.100	0.100	100	0.111	111	71-129	10	35	mg/kg	08.31.2020 18:54	
m,p-Xylenes	<0.00401	0.200	0.207	104	0.224	112	70-135	8	35	mg/kg	08.31.2020 18:54	
o-Xylene	<0.00200	0.100	0.102	102	0.114	114	71-133	11	35	mg/kg	08.31.2020 18:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		94		70-130	%	08.31.2020 18:54
4-Bromofluorobenzene	98		98		70-130	%	08.31.2020 18:54

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

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

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

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



Chain of Custody

Work Order No: 671435

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) 620-2000 West Palm Beach, FL (561) 689-6701

www.xenco.com Page 1 of 1

Project Manager:	Don McR	Bill to: (if different)	Kyle Little
Company Name:	LT Environmental Inc. Midland Office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	N
Phone:	432-436-3849	Email:	DMcR@LTENV.COM, DMcR@XTO.COM

Project Name:	EMSV B 405	Turn Around	
Project Number:	012019105	Routine	☐
Project Location:	LEA	Rush:	24hr
Sampler's Name:	William Mather	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	☒ No	Wet Ice:	☒ No
Temperature (°C):	7.2/7.0	Thermometer ID			
Received Intact:	☒ Yes	Correction Factor:	-0.2		
Cooler Custody Seals:	Yes ☒ No ☒ N/A	Total Containers:	1		
Sample Custody Seals:	Yes ☒ No ☒ N/A				

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

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$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
<i>W. Mather</i>	<i>C. Little</i>	6-31-2020 16:23			

ATTACHMENT 3: PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG



Photograph 1: View of hydrovac exposing electrical lines



Photograph 2: View of trackhoe excavating in between lines, facing NW



Photograph 3: View of trackhoe excavating in the central section of the excavation facing E.



Photograph 4: View of trackhoe excavating in the SE section of the excavation.

Site Name: EMSU B #865

Site Location: 32.583525, -103.326422

Photographs Taken: August 24, 2020 through September 16, 2020

Released to Imaging: 2/3/2021 11:12:33 AM

PHOTOGRAPHIC LOG



Photograph 5: View of complete excavation, SW section, facing W.



Photograph 6: View of complete excavation, central section, facing NW.



Photograph 7: View of complete excavation, central section, facing N.



Photograph 8: View of complete excavation, NE section, facing NE.

Site Name: EMSU B #865

Site Location: 32.583525, -103.326422

Photographs Taken: August 24, 2020 through September 16, 2020

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PHOTOGRAPHIC LOG



Photograph 9: View of liner installation process starting.



Photograph 10: View of liners installed in the NE section of excavation



Photograph 11: View of liner installed in SW section of excavation.



Photograph 12: View of completed backfill.

Site Name: EMSU B #865

Site Location: 32.583525, -103.326422

Photographs Taken: August 24, 2020 through September 16, 2020

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PHOTOGRAPHIC LOG



Photograph 13: View of completed backfill facing NE



Photograph 14: View of completed backfill and lease road facing NW



Photograph 15: View of completed re-seeding facing NW



Photograph 16: View of completed re-seeding facing NE

Site Name: EMSU B #865

Site Location: 32.583525, -103.326422

Photographs Taken: August 24, 2020 through September 16, 2020

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District I
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 11284

CONDITIONS OF APPROVAL

Operator: XTO ENERGY, INC Building #5	6401 Holiday Hill Road Midland, TX79707	OGRID: 5380	Action Number: 11284	Action Type: C-141
OCD Reviewer ceads	Condition None			