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	NAB1906054852
District RP	2 2RP-5273
Facility ID	
Application ID	pAB1906054582

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)* NAB1906054852
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.275130° Longitude -103.927864°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 111H	Site Type Production Well Facility
Date Release Discovered 2/11/2019	API# *(if applicable)* 30-015-44400

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 3
	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: During frac pumping operations, contractor reported a washout between the Tee and the lower torque going to the pop-off. This produced fluid to exit the line. The pump rate was dropped and the sand was cut off and shut down. A cap was installed on the Tee. Pressure test was completed, the well was flushed, and operations resumed. Some fluid was captured and recovered from lined containment and some fluid escaped containment from the fluid spray. An environmental contractor will be retained to assist with remediation efforts when completion activities are concluded on the well pad.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1906054852
District RP	2 2RP-5273
Facility ID	
Application ID	pAB1906054582

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Coordinator
Signature: [signature]
Date: 2-25-19
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: [signature]
Date: 3/1/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

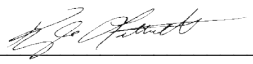
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
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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	NAB1907958805
District RP	2 2RP-5312
Facility ID	
Application ID	pAB1907958529

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)* NAB1907958805
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.274827 Longitude -103.927638

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 122H	Site Type Production Well Facility
Date Release Discovered 3/1/2019	API# *(if applicable)* 30-015-44401

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 25	Volume Recovered (bbls) 18
	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

While pumping frac stage the bleed offs washed out. Recycled water spilled into containment and onto the ground. A vacuum truck was dispatched to recover free-standing fluid. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907958805
District RP	2RP-5312
Facility ID	
Application ID	pAB1907958529

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 Mike Bratcher, Rob Hamlet, and Jim Griswold (NMOCD), Ryan Mann (SLO), and Jim Amos (BLM) on 3/1/2019 by email

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: [signature] Date: 3-15-2019

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

OCD Only

Received by: [signature] Date: 3/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
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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	NAB1907957890
District RP	2 2RP-5311
Facility ID	
Application ID	pAB1907957580

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)* NAB1907957890
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.274827 Longitude -103.927638

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 122H	Site Type Production Well Facility
Date Release Discovered 3/2/2019	API# *(if applicable)* 30-015-44401

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 4.5
	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

During pumping a frac stage, the packing on a pump started leaking. The check valve would not hold. Operations were stopped. A vacuum truck was dispatched to recover free-standing fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907957890
District RP	2RP-5311
Facility ID	
Application ID	pAB1907957580

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature: Date: 3-15-19
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only
Received by: Date: 3/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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

August 30, 2019

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

RE: Closure Request
Remuda North 30 State 111H / 122H
Remediation Permit Numbers 2RP-5273, 2RP-5312, and 2RP-5311
Eddy County, New Mexico

Dear Mr. Bratcher

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following report detailing site assessment, soil sampling, and excavation activities at the Remuda North 30 State 111H / 122H (Site) in Unit L, Section 30, Township 23 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, soil sampling, and excavation activities was to confirm the presence or absence of soil impacts following three separate releases of produced water at the Site that occurred during frac pumping operations. Based on the excavation activities and results of the soil sampling events, XTO is submitting this Closure Report and requesting no further action for Remediation Permit (RP) Numbers 2RP-5273, 2RP-5312, and 2RP-5311.

RELEASE BACKGROUND

On February 11, 2019, a washout occurred between the tee and the lower torque going to the pop-off tank causing 5 barrels (bbls) of produced water to be released from the line into a lined containment. Some fluid was captured and recovered from the lined containment, and some fluid escaped containment as over spray. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 3 bbls of produced water were recovered. A cap was installed on the tee, a pressure test was completed, the well was flushed, and operations resumed. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on February 25, 2019, and was assigned RP Number 2RP-5273 (Attachment 1).

On March 1, 2019, a second release occurred after the bleed offs washed out, resulting in the release of 25 bbls of produced water into a containment and onto the caliche well pad surrounding the containment. A vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 18 bbls of produced water were recovered. XTO reported the release to the NMOCD on a Form C-141 on March 15, 2019, and was assigned RP Number 2RP-5312 (Attachment 1).

On March 2, 2019, a third release occurred after the packing on a pump started leaking due to check valve failure. This resulted in the release of 5 bbls of produced water into a lined containment. Operations were stopped, and a vacuum truck was dispatched to the Site to recover free-standing fluid; approximately 4.5 bbls of produced water were recovered. XTO reported the release to the NMOCD on a Form C-141 on March 15, 2019, and was assigned RP Number 2RP-5311 (Attachment 1).

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 50 and 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted water well with depth to water data is United States Geological Survey (USGS) well 321717103561001, located approximately 5,464 feet northwest of the Site. The water well has a depth to groundwater of 50.26 feet. The total depth could not be determined. Ground surface elevation at the water well location is 3,033 feet above mean sea level (AMSL), which is approximately 59 feet lower in elevation than the Site. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located less than 20 feet east of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a high potential karst area.

CLOSURE CRITERIA

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

- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- Total petroleum hydrocarbons (TPH): 100 mg/kg;
- Chloride: 600 mg/kg.

SITE ASSESSMENT, EXCAVATION, AND DELINEATION SOIL SAMPLING ACTIVITIES

On March 7 and March 18, 2019, LTE personnel were at the Site to evaluate the release extents based on information provided on the Form C-141 and visual observations. LTE personnel collected seven preliminary soil samples (SS01 through SS07) within the release extents from a depth of approximately 0.5 feet bgs to assess for soil impacts. Soil was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and

Hach© chloride QuanTab© test strips, respectively. The release extents and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2.

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

Based on laboratory analytical results for preliminary soil samples SS01 through SS07, additional assessment activities were scheduled. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 2.

On July 30 and July 31, 2019, LTE personnel returned to the Site to oversee soil assessment activities to further delineate impacted soil. Potholes were advanced via a track hoe at nine locations within and around the release extent. Pothole PH01 was advanced to a depth of 6 feet bgs, potholes PH02 through PH05 were advanced to a depth of 4 feet bgs, and potholes PH06 through PH09 were advanced to a depth of 2 feet bgs. Two delineation soil samples were collected from each pothole at depths ranging from 1 foot to 6 feet bgs. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Midland, Texas. All potholes were backfilled with the soil removed. The potholes and delineation soil sample locations are depicted on Figure 3.

On August 12 and August 13, 2019, LTE personnel returned to the Site to oversee excavation of soil as indicated by laboratory analytical results from preliminary soil samples SS01 through SS07 and pothole sample PH01. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Following removal of impacted soil, LTE collected 5-point composite soil samples every 200 square feet from the sidewalls and floor of the excavation. The 5-point composite samples were collected by depositing five aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. Composite soil samples SW01 through SW04 were collected from the sidewalls of the excavation at depths ranging from ground surface to 3 feet bgs. Composite soil samples FS01 through FS21 were collected from the floor of the excavation at a depth of 3 feet bgs. The excavation soil samples

were submitted for laboratory analysis of benzene, BTEX, TPH, and chloride. The excavation extent and soil sample locations are depicted on Figure 4.

The excavation extent measured approximately 5,041 square feet in area. A total of approximately 560 cubic yards of impacted soil were removed from the excavation. The impacted soil will be transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated that TPH and/or chloride concentrations exceeded the Closure Criteria in preliminary soil samples SS01 through SS07 collected at 0.5 feet bgs and in delineation soil sample PH01 collected at 1 foot bgs. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in delineation soil samples PH02 through PH09 and PH01A through PH09A. Impacted soil was excavated, and laboratory analytical results for confirmation soil samples FS01 through FS21 and SW01 through SW04 collected from the floor and sidewalls of the excavation indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results are presented on Figure 2, Figure 3, and Figure 4, and summarized in Table 1. The complete laboratory analytical reports are included as Attachment 4.

CLOSURE REQUEST

Soil with chloride and TPH impacts was identified in the release areas as indicated by laboratory analytical results for the preliminary and delineation soil samples SS01 through SS07 and PH01 and field screening activities. A total of approximately 560 cubic yards of impacted soil were excavated from the Site. Laboratory analytical results for the delineation soil samples outside the excavated area and all excavation confirmation soil samples indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria and no further excavation was warranted.

Initial response efforts and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release numbers 2RP-5273, 2RP-5312, and 2RP-5311. Upon approval of this closure request, XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions. An updated Form C-141 for each release is included as Attachment 1.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Ryan Mann, State Land Office
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5273, 2RP-5312, and 2RP-5311)
Attachment 2	Photographic Log
Attachment 3	Lithologic / Soil Sample Logs
Attachment 4	Laboratory Analytical Reports

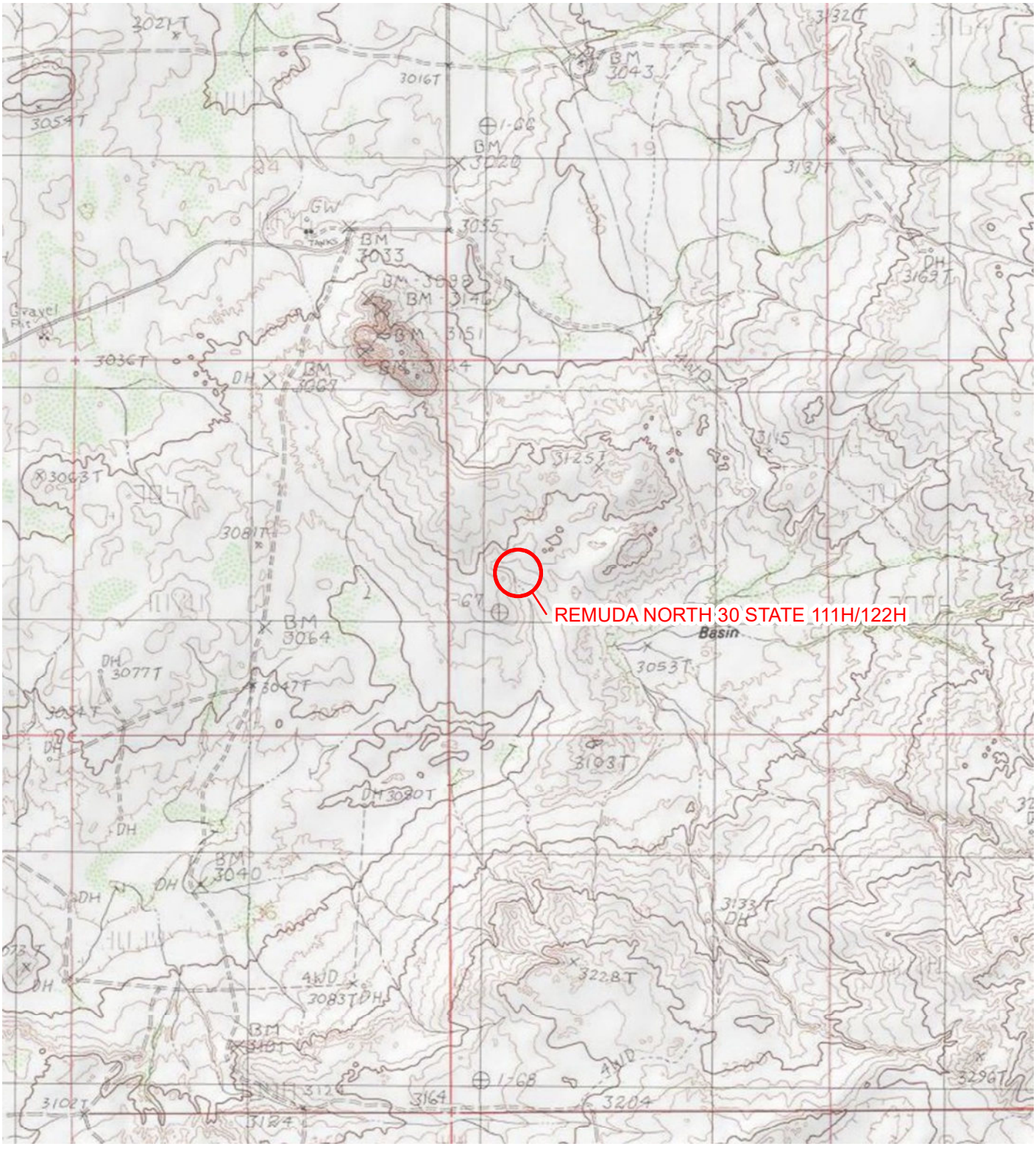


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

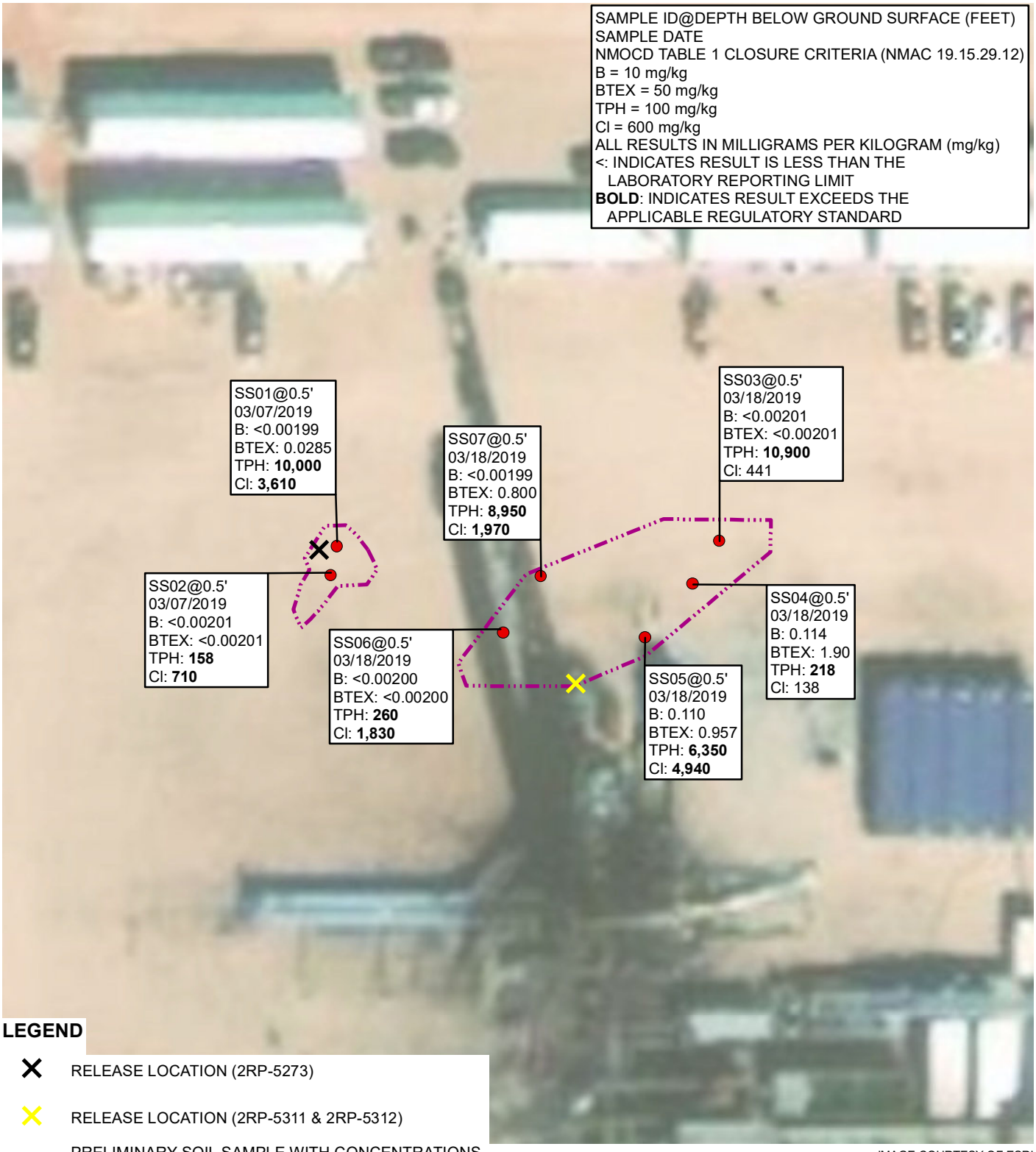
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5311, & 2RP-5312

FIGURE 1
SITE LOCATION MAP
REMUDA NORTH 30 STATE 111H/122H
UNIT L SEC 30 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919040_REMUDA NORTH 30 STATE 111H-122H\012919040_FIG01_SL_2019.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5311, 2RP-5312

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
REMUDA NORTH 30 STATE 111H/122H
UNIT L SEC 30 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919040_REMUDA NORTH 30 STATE 111H-122H\012919040_FIG02_PRELIMINARY_2019.mxd

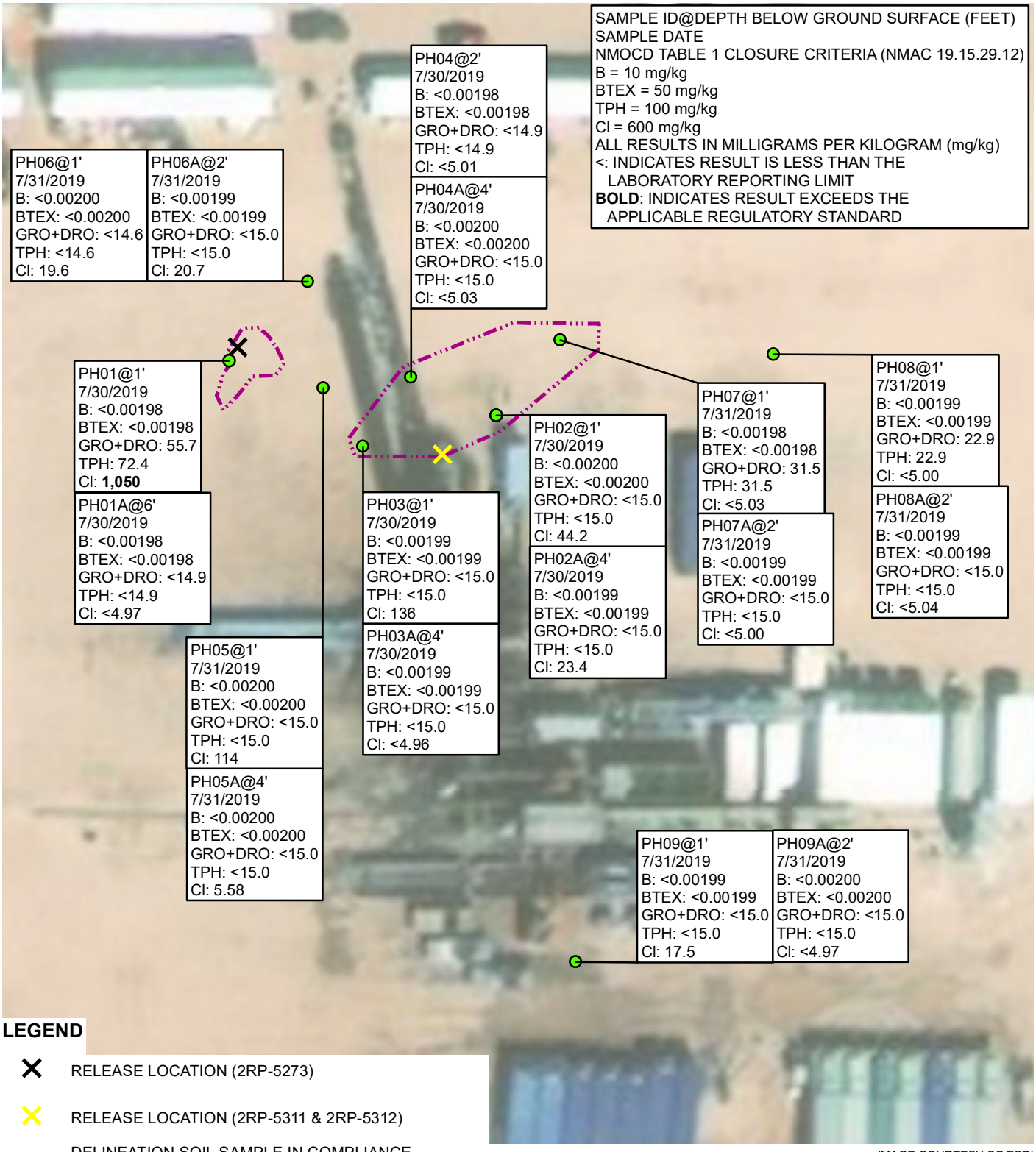


FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
REMUDA NORTH 30 STATE 111H/122H
UNIT L SEC 30 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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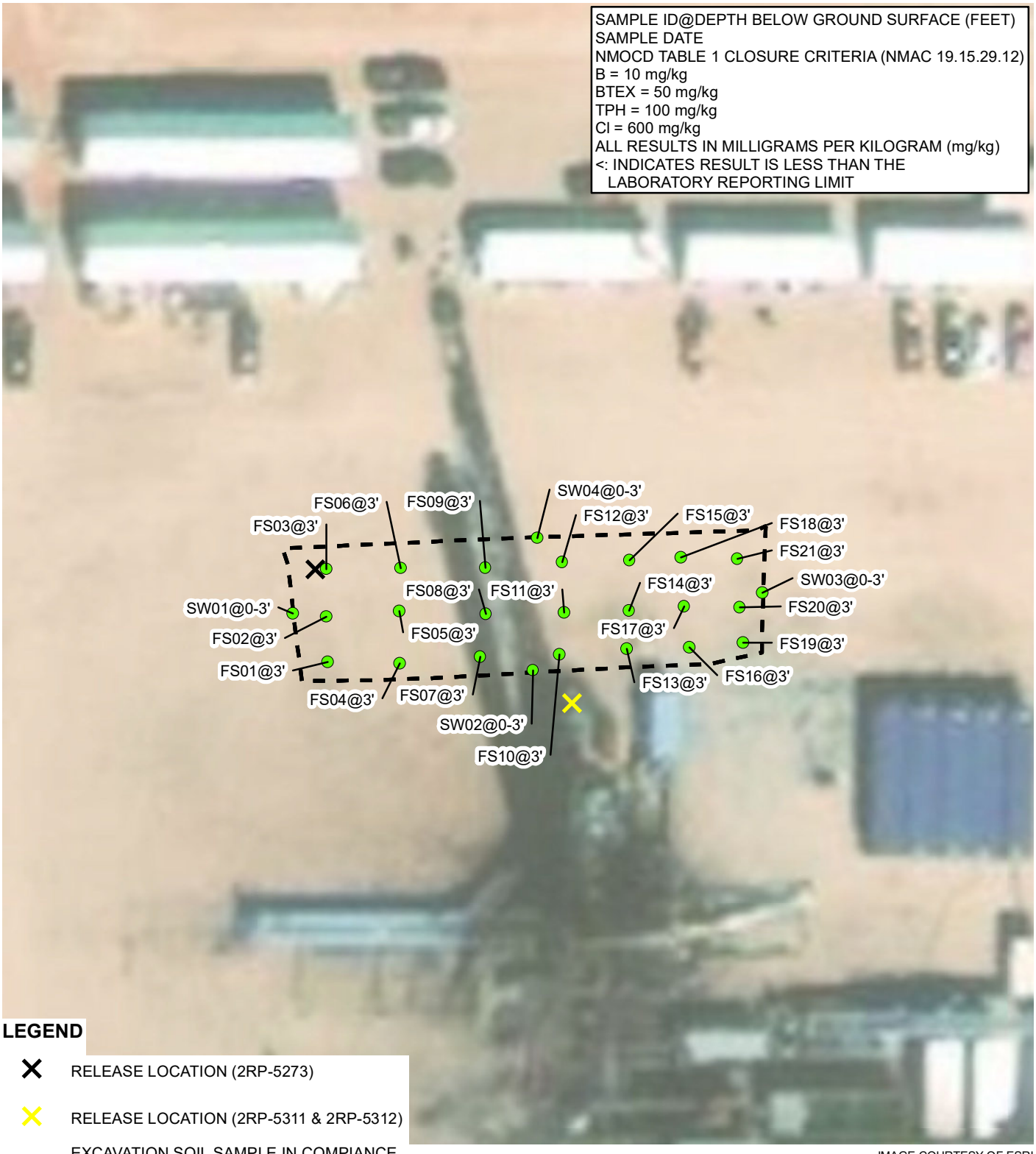

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5311, 2RP-5312

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
REMUDA NORTH 30 STATE 111H/122H
UNIT L SEC 30 T23S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

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TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA NORTH 30 STATE 111H / 122H
REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5312, and 2RP-5311
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	03/07/2019	<0.00199	0.0179	<0.00199	0.0106	0.0285	199	9,630	196	9,829	**10,000**	**3,610**
SS02	0.5	03/07/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	124	33.7	124	**158**	**710**
SS03	0.5	03/18/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	1,180	9,680	75.7	10,860	**10,900**	441
SS04	0.5	03/18/2019	0.114	0.0557	0.0970	1.63	1.90	<15.0	164	53.8	164	**218**	138
SS05	0.5	03/18/2019	0.110	0.0488	0.0652	0.733	0.957	254	4,350	1,750	4,604	**6,350**	**4,940**
SS06	0.5	03/18/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	190	70.4	190	**260**	**1,830**
SS07	0.5	03/18/2019	<0.00199	0.0601	0.0851	0.655	0.800	1,290	7,660	<74.8	8,950	**8,950**	**1,970**
PH01	1	07/30/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	55.7	16.7	55.7	72.4	**1,050**
PH01A	6	07/30/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	<4.97
PH02	1	07/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	44.2
PH02A	4	07/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	23.4
PH03	1	07/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	136
PH03A	4	07/30/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<4.96
PH04	2	07/30/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	<14.9	<14.9	<14.9	<14.9	<5.01
PH04A	4	07/30/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<5.03
PH05	1	07/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	114
PH05A	4	07/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	5.58
PH06	1	07/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.6	<14.6	<14.6	<14.6	<14.6	19.6
PH06A	2	07/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	20.7
PH07	1	07/31/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<14.9	31.5	<14.9	31.5	31.5	<5.03
PH07A	2	07/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.00

TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA NORTH 30 STATE 111H / 122H
REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5312, and 2RP-5311
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
PH08	1	07/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	22.9	<15.0	22.9	22.9	<5.00
PH08A	2	07/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	<5.04
PH09	1	07/31/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	17.5
PH09A	2	07/31/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	<4.97
SW01	0 - 3	08/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	66.3
SW02	0 - 3	08/12/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	44.7
SW03	0 - 3	08/12/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	70.1
SW04	0 - 3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	271
FS01	3	08/13/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	17.0
FS02	3	08/13/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<25.0	<25.0	<25.0	<25.0	<25.0	26.6
FS03	3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	462
FS04	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	5.44
FS05	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	40.4
FS06	3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	273
FS07	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	11.6
FS08	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	170
FS09	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	168
FS10	3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<24.9	<24.9	<24.9	<24.9	<24.9	122
FS11	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	115
FS12	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	110
FS13	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	15.1
FS14	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<24.9	<24.9	<24.9	<24.9	<24.9	12.3
FS15	3	08/13/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<25.0	<25.0	<25.0	<25.0	<25.0	9.38

TABLE 1
SOIL ANALYTICAL RESULTS

REMUDA NORTH 30 STATE 111H / 122H
REMEDIATION PERMIT NUMBERS 2RP-5273, 2RP-5312, and 2RP-5311
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
FS16	3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	9.30
FS17	3	08/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<25.0	<25.0	<25.0	<25.0	<25.0	12.8
FS18	3	08/13/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<24.9	<24.9	<24.9	<24.9	<24.9	8.92
FS19	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	<4.96
FS20	3	08/13/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<24.9	<24.9	<24.9	<24.9	<24.9	<5.03
FS21	3	08/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<25.0	<25.0	<25.0	<25.0	<25.0	5.79
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
TPH - total petroleum hydrocarbons
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
NE - not established

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	NAB1906054852
District RP	2 2RP-5273
Facility ID	
Application ID	pAB1906054582

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)* NAB1906054852
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.275130° Longitude -103.927864°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 111H	Site Type Production Well Facility
Date Release Discovered 2/11/2019	API# *(if applicable)* 30-015-44400

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 3
	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: During frac pumping operations, contractor reported a washout between the Tee and the lower torque going to the pop-off. This produced fluid to exit the line. The pump rate was dropped and the sand was cut off and shut down. A cap was installed on the Tee. Pressure test was completed, the well was flushed, and operations resumed. Some fluid was captured and recovered from lined containment and some fluid escaped containment from the fluid spray. An environmental contractor will be retained to assist with remediation efforts when completion activities are concluded on the well pad.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1906054852
District RP	2 2RP-5273
Facility ID	
Application ID	pAB1906054582

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell
Title: SH&E Coordinator
Signature: [signature]
Date: 2-25-19
email: Kyle_Littrell@xtoenergy.com
Telephone: 432-221-7331

OCD Only

Received by: [signature]
Date: 3/1/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5273
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

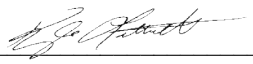
☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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	NAB1907958805
District RP	2 2RP-5312
Facility ID	
Application ID	pAB1907958529

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)* NAB1907958805
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.274827 Longitude -103.927638

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 122H	Site Type Production Well Facility
Date Release Discovered 3/1/2019	API# *(if applicable)* 30-015-44401

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 25	Volume Recovered (bbls) 18
	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

While pumping frac stage the bleed offs washed out. Recycled water spilled into containment and onto the ground. A vacuum truck was dispatched to recover free-standing fluid. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907958805
District RP	2RP-5312
Facility ID	
Application ID	pAB1907958529

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 Mike Bratcher, Rob Hamlet, and Jim Griswold (NMOCD), Ryan Mann (SLO), and Jim Amos (BLM) on 3/1/2019 by email

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: [signature] Date: 3-15-2019

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

OCD Only

Received by: [signature] Date: 3/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5312
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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	NAB1907957890
District RP	2 2RP-5311
Facility ID	
Application ID	pAB1907957580

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)* NAB1907957890
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.274827 Longitude -103.927638

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Remuda North 30 State 122H	Site Type Production Well Facility
Date Release Discovered 3/2/2019	API# *(if applicable)* 30-015-44401

Unit Letter	Section	Township	Range	County
L	30	23S	30E	Eddy

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

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 5	Volume Recovered (bbls) 4.5
	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

During pumping a frac stage, the packing on a pump started leaking. The check valve would not hold. Operations were stopped. A vacuum truck was dispatched to recover free-standing fluids. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1907957890
District RP	2RP-5311
Facility ID	
Application ID	pAB1907957580

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

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
Signature: Date: 3-15-19
email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only
Received by: Date: 3/20/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

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

Printed Name: _____Kyle Littrell_____ Title: ____SH&E Supervisor_____

Signature:_____ Date: __08/30/2019_____

email: _____Kyle_Littrell@xtoenergy.com_____ Telephone: ___432-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-5311
Facility ID	
Application ID	

Closure

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

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

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature:  Date: 08/30/2019

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Western view of release extent during preliminary soil sampling and site assessment.

Project: 012919040	XTO Energy, Inc. Remuda North 30 State 111H / 122H	LTE Advancing Opportunity
March 7, 2019	Photographic Log	

Northern view of final excavation extent.

Project: 012919040	XTO Energy, Inc. Remuda North 30 State 111H / 122H	LTE Advancing Opportunity
August 13, 2019	Photographic Log	

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

Identifier:	Date:
PH01	07/30/19
Project Name:	**RP Number:**
Remuda N 30 State 111H/122H	
Logged By: Fatima Smith	**Method:**
Hole Diameter:	**Total Depth:**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	1080	354	N	PH01	0–1		S	SP-SM, reddish brwn, some roots, no odor, low plasticity, poorly graded
Dry	3410	1894	N		2–3			
Dry	162	253	Y		4–5			slight staining, no odor SP-SM, reddish brwn, low plas, poorly graded
Dry	<162	2.5	N	PH01A	6			no staining, no odor deepest sample @ 6'

Fatima Smith

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220

Compliance · Engineering · Remediation

Identifier:	Date:
PH02	07/30/19
Project Name: Remuda N 30 State 111H/122H	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<162	1872	N	PH02	0–1		S	SP-SM, reddish brwn, poorly graded, low plasticity, no odor, some roots
Dry		2.8	N		2			
Dry		1.3	N	PH02A	3–4			deepest sample @ 4'

Fatima

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

Identifier:	Date:
PH03	07/30/19
Project Name: Remuda N 30 State 111H/122H	**RP Number:**
Logged By: Fatima Smith	**Method:**
Hole Diameter:	**Total Depth:**
Lat/Long:	**Field Screening:**

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	492	0.5	N	PH03	0–1		S	SP-SM, reddish brwn, low plasticity, no odor, poorly graded
Dry	<162	1.5	N		2–3			SM, very sandy, no plasticity, no odor, roots
Dry	<162	2.7	N	PH03A	4			deepest sample @ 4'

Fatima

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
Compliance · Engineering · Remediation

Identifier:	Date:
PH04	07/30/19
Project Name: Remuda N 30 State 111H/122H	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<162	0.7	N		0–1			SP-SM, low plasticity, reddish brwn, topsoil, no odor
Dry	<162	4.3	N	PH04	2–3			SM, sandy, no plasticity, poorly graded, roots, no odor
Dry	<162	0.1	N	PH04A	4			deepest sample @ 4'

0 1 2 3 4 5 6 7 8 9 10 11 12

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Identifier:	Date:
PH05	07/31/19
Project Name: Remuda N 30 State 111H/122H	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	196	27.5	N	PH05	0–1		S	SP-SM, poorly graded, reddish brwn, ~~no~~ F.S. low plasticity, no odor
Dry	<162	12.1	N		2–3			
	<162	10.1	N	PH05A	4			deepest sample @ 4'
~~Dry~~					5–12			

Fatima

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Identifier:	Date:
PH06	07/31/19
Project Name: Remuda N 30 State 111H/122H	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<162	6.5	N	PH06	0–1		S	sp-sm, reddish brwn, low plasticity, no odor, poorly graded
Dry	<162	2.5	N	PH06A	1–2		S	deepest sample @ 2'
					2–12			

Fatima

LT Environmental, Inc.
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Carlsbad, New Mexico 88220
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Identifier:	Date:
PH07	07/31/19
Project Name: Remuda N 30 State 111H/122H	**RP Number:**
Logged By: Fatima Smith	**Method:**
Hole Diameter:	**Total Depth:**
Lat/Long:	**Field Screening:**

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<162	37.9	N	PH07	0–1		S	SP-SM, reddish brwn, low plasticity, poorly graded
Dry	<162	29.6	N	PH07A	1–2		S	SM, very sandy, reddish brwn, roots, no plasticity
								deepest sample @ 2'

Fatima

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

Identifier: Remuda N 30 State 111H/122H	Date: 07/31/19
Project Name: PH08	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Dry	<162	21.9	N	PH08	0–1		S	SP-SM, reddish brwn, low plasticity, no odor, poorly graded
Dry	<162	22.5	N	PH08A	1–2		S	SM, very sandy, reddish brwn, no odor, no plasticity
								deepest sample @ 2'

0 1 2 3 4 5 6 7 8 9 10 11 12

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

Identifier:	Date:
PH09	07/31/19
Project Name: Remuda N 30 State 111H/122H	RP Number:
Logged By: Fatima Smith	Method:
Hole Diameter:	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:

Field Screening:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
			Y		0	0.5	S	SP-SM, reddish brwn, no odor, low plasticity, poorly graded, staining @ 0.5' w/ looking @ pothole walls
Dry	<162	14.0	N	PH09	1		S	
Dry	<162	23.4	N	PH09A	2		S	deepest sample @ 2'
					3			
					4			
					5			
					6			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 617313

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remuda North 30 State 111H

012919033

18-MAR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

18-MAR-19

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

Reference: XENCO Report No(s): **617313**
Remuda North 30 State 111H
Project Address: Delaware Basin

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 617313. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 617313 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Kalei Stout
Midland Laboratory Director

Sample Cross Reference 617313

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 111H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-07-19 10:30	0.5	617313-001
SS02	S	03-07-19 12:00	0.5	617313-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3081985 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 617313-001.

Batch: LBA-3082424 BTEX by EPA 8021B
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 617310-006 SD,617313-001.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 617313

LT Environmental, Inc., Arvada, CO

Project Name: Remuda North 30 State 111H

Project Id: 012919033
Contact: Adrian Baker
Project Location: Delaware Basin

Date Received in Lab: Tue Mar-12-19 12:05 pm
Report Date: 18-MAR-19
Project Manager: Kalei Stout

Analysis Requested									
	Lab Id:	617313-001		617313-002					
	Field Id:	SS01		SS02					
	Depth:	0.5-		0.5-					
	Matrix:	SOIL		SOIL					
	Sampled:	Mar-07-19 10:30		Mar-07-19 12:00					
BTEX by EPA 8021B	***Extracted:***	Mar-15-19 15:00		Mar-15-19 15:00					
	Analyzed:	Mar-16-19 20:57		Mar-16-19 21:16					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201				
Toluene		0.0179	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		0.00703	0.00398	<0.00402	0.00402				
o-Xylene		0.00353	0.00199	<0.00201	0.00201				
Total Xylenes		0.0106	0.00199	<0.00201	0.00201				
Total BTEX		0.0285	0.00199	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Mar-13-19 10:00		Mar-13-19 10:00					
	Analyzed:	Mar-13-19 16:45		Mar-13-19 16:56					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		3610	49.9	710	49.9				
TPH by SW8015 Mod	***Extracted:***	Mar-12-19 14:00		Mar-12-19 14:00					
	Analyzed:	Mar-13-19 07:37		Mar-13-19 01:12					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		199	75.0	<15.0	15.0				
Diesel Range Organics (DRO)		9630	75.0	124	15.0				
Motor Oil Range Hydrocarbons (MRO)		196	75.0	33.7	15.0				
Total TPH		10000	75.0	158	15.0				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 617313

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 111H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617313-001	Date Collected:	03.07.19 10.30	Sample Depth:	0.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3610**	49.9	mg/kg	03.13.19 16.45		10

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**199**	75.0	mg/kg	03.13.19 07.37		5
Diesel Range Organics (DRO)	C10C28DRO	**9630**	75.0	mg/kg	03.13.19 07.37		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**196**	75.0	mg/kg	03.13.19 07.37		5
Total TPH	PHC635	**10000**	75.0	mg/kg	03.13.19 07.37		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	03.13.19 07.37	
o-Terphenyl	84-15-1	216	%	70-135	03.13.19 07.37	**

Certificate of Analytical Results 617313

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 111H

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617313-001	Date Collected:	03.07.19 10.30	Sample Depth:	0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.16.19 20.57	U	1
Toluene	108-88-3	**0.0179**	0.00199	mg/kg	03.16.19 20.57		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.16.19 20.57	U	1
m,p-Xylenes	179601-23-1	**0.00703**	0.00398	mg/kg	03.16.19 20.57		1
o-Xylene	95-47-6	**0.00353**	0.00199	mg/kg	03.16.19 20.57		1
Total Xylenes	1330-20-7	**0.0106**	0.00199	mg/kg	03.16.19 20.57		1
Total BTEX		**0.0285**	0.00199	mg/kg	03.16.19 20.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	03.16.19 20.57	
4-Bromofluorobenzene	460-00-4	145	%	70-130	03.16.19 20.57	**

Certificate of Analytical Results 617313

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 111H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617313-002	Date Collected:	03.07.19 12.00	Sample Depth:	0.5

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	03.13.19 10.00	Basis:	Wet Weight
Seq Number:	3082058				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**710**	49.9	mg/kg	03.13.19 16.56		10

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

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.13.19 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	**124**	15.0	mg/kg	03.13.19 01.12		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**33.7**	15.0	mg/kg	03.13.19 01.12		1
Total TPH	PHC635	**158**	15.0	mg/kg	03.13.19 01.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.13.19 01.12	
o-Terphenyl	84-15-1	91	%	70-135	03.13.19 01.12	

Certificate of Analytical Results 617313

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 111H

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.12.19 12.05
Lab Sample Id:	617313-002	Date Collected:	03.07.19 12.00	Sample Depth:	0.5
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.15.19 15.00	Basis:	Wet Weight
Seq Number:	3082424				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.16.19 21.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.16.19 21.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.16.19 21.16	
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.16.19 21.16	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 617313

LT Environmental, Inc.

Remuda North 30 State 111H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Solid Date Prep: 03.13.19
MB Sample Id: 7673476-1-BLK LCS Sample Id: 7673476-1-BKS LCSD Sample Id: 7673476-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	0.883	250	266	106	272	109	90-110	2	20	mg/kg	03.13.19 12:08	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617310-004 MS Sample Id: 617310-004 S MSD Sample Id: 617310-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.64	249	269	107	270	107	90-110	0	20	mg/kg	03.13.19 12:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082058 Matrix: Soil Date Prep: 03.13.19
Parent Sample Id: 617311-007 MS Sample Id: 617311-007 S MSD Sample Id: 617311-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.01	249	269	108	269	108	90-110	0	20	mg/kg	03.13.19 15:09	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081985 Matrix: Solid Date Prep: 03.12.19
MB Sample Id: 7673483-1-BLK LCS Sample Id: 7673483-1-BKS LCSD Sample Id: 7673483-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1020	102	70-135	6	20	mg/kg	03.12.19 21:12	
Diesel Range Organics (DRO)	<8.13	1000	1090	109	1040	104	70-135	5	20	mg/kg	03.12.19 21:12	

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

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

QC Summary 617313

LT Environmental, Inc.

Remuda North 30 State 111H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3081985 Matrix: Soil Date Prep: 03.12.19
Parent Sample Id: 617310-001 MS Sample Id: 617310-001 S MSD Sample Id: 617310-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	1040	104	1030	103	70-135	1	20	mg/kg	03.12.19 22:12	
Diesel Range Organics (DRO)	<8.12	999	1070	107	1070	107	70-135	0	20	mg/kg	03.12.19 22:12	

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

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082424 Matrix: Solid Date Prep: 03.15.19
MB Sample Id: 7673758-1-BLK LCS Sample Id: 7673758-1-BKS LCSD Sample Id: 7673758-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.101	102	0.0952	95	70-130	6	35	mg/kg	03.16.19 13:25	
Toluene	<0.000453	0.0994	0.106	107	0.102	102	70-130	4	35	mg/kg	03.16.19 13:25	
Ethylbenzene	<0.000561	0.0994	0.0959	96	0.0930	93	70-130	3	35	mg/kg	03.16.19 13:25	
m,p-Xylenes	<0.00101	0.199	0.184	92	0.179	90	70-130	3	35	mg/kg	03.16.19 13:25	
o-Xylene	<0.000342	0.0994	0.0956	96	0.0925	93	70-130	3	35	mg/kg	03.16.19 13:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		104		101		70-130	%	03.16.19 13:25
4-Bromofluorobenzene	104		104		102		70-130	%	03.16.19 13:25

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3082424 Matrix: Soil Date Prep: 03.15.19
Parent Sample Id: 617310-006 MS Sample Id: 617310-006 S MSD Sample Id: 617310-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000461	0.100	0.0909	90	0.0436	43	70-130	70	35	mg/kg	03.16.19 14:03	XF
Toluene	0.00121	0.100	0.0952	94	0.0621	61	70-130	42	35	mg/kg	03.16.19 14:03	XF
Ethylbenzene	<0.000565	0.100	0.0895	90	0.0729	73	70-130	20	35	mg/kg	03.16.19 14:03	
m,p-Xylenes	<0.00101	0.200	0.171	86	0.148	74	70-130	14	35	mg/kg	03.16.19 14:03	
o-Xylene	0.000441	0.100	0.0887	88	0.0736	73	70-130	19	35	mg/kg	03.16.19 14:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		124		70-130	%	03.16.19 14:03
4-Bromofluorobenzene	107		216	**	70-130	%	03.16.19 14:03

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

Chain of Custody

Work Order No: 617313

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda North 30 State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Robert M.	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.3 0.2	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.1
Sample Custody Seals:	Yes No N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	03/07/19	1030	0.5	1	X	X	X	discrete
SS02	S	03/07/19	1200	0.5	1	X	X	X	discrete

ANALYSIS REQUEST

Work Order Notes

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Robert McGee	Taylor Ray	3/8/19 @ 1640	2 Taylor Ray	Bad	3/12/19 1205
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 13 of 15

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

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

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

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

Work Order #: 617313

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 03/12/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/12/2019
Jessica Kramer

Analytical Report 618270

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Remuda North 30 State 122H

29-AUG-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

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

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

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

29-AUG-19

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

Reference: XENCO Report No(s): **618270**
Remuda North 30 State 122H
Project Address:

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618270. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 618270 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS03	S	03-18-19 12:50	0.5 ft	618270-001
SS04	S	03-18-19 13:10	0.5 ft	618270-002
SS05	S	03-18-19 13:25	0.5 ft	618270-003
SS06	S	03-18-19 13:35	0.5 ft	618270-004
SS07	S	03-18-19 13:50	0.5 ft	618270-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Remuda North 30 State 122H

Project ID:
Work Order Number(s): *618270*

Report Date: *29-AUG-19*
Date Received: *03/20/2019*

Sample receipt non conformances and comments:

PER CLEINTS EMAIL, CORRECTED SAMPLE NAMES. NEW VERSION GENERATED JK 08/29/19
SS01 -> SS03
SS02 -> SS04
SS03 -> SS05
SS04 -> SS06
SS05 -> SS07

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083359 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected;
Samples affected are: 618270-003.

Batch: LBA-3083412 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.
Samples affected are: 618270-005,618270-002,618270-003.

Certificate of Analysis Summary 618270

LT Environmental, Inc., Arvada, CO

Project Name: Remuda North 30 State 122H

Project Id:
Contact: Adrian Baker
Project Location:

Date Received in Lab: Wed Mar-20-19 01:15 pm
Report Date: 29-AUG-19
Project Manager: Kalei Stout

Analysis Requested											
	Lab Id:	618270-001		618270-002		618270-003		618270-004		618270-005	
	Field Id:	SS03		SS04		SS05		SS06		SS07	
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-18-19 12:50		Mar-18-19 13:10		Mar-18-19 13:25		Mar-18-19 13:35		Mar-18-19 13:50	
BTEX by EPA 8021B	***Extracted:***	Mar-25-19 16:30		Mar-25-19 16:30		Mar-25-19 16:30		Mar-25-19 16:30		Mar-25-19 16:30	
	Analyzed:	Mar-26-19 06:08		Mar-26-19 08:59		Mar-26-19 08:40		Mar-26-19 06:27		Mar-26-19 07:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	0.114	0.0199	0.110	0.0200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00201	0.00201	0.0557	0.0199	0.0488	0.0200	<0.00200	0.00200	0.0601	0.00199
Ethylbenzene		<0.00201	0.00201	0.0970	0.0199	0.0652	0.0200	<0.00200	0.00200	0.0851	0.00199
m,p-Xylenes		<0.00402	0.00402	1.06	0.0398	0.463	0.0400	<0.00401	0.00401	0.434	0.00398
o-Xylene		<0.00201	0.00201	0.572	0.0199	0.270	0.0200	<0.00200	0.00200	0.221	0.00199
Total Xylenes		<0.00201	0.00201	1.63	0.0199	0.733	0.0200	<0.00200	0.00200	0.655	0.00199
Total BTEX		<0.00201	0.00201	1.90	0.0199	0.957	0.0200	<0.00200	0.00200	0.800	0.00199
Inorganic Anions by EPA 300	***Extracted:***	Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35		Mar-21-19 10:35	
	Analyzed:	Mar-21-19 16:35		Mar-21-19 16:45		Mar-21-19 16:55		Mar-21-19 17:34		Mar-21-19 17:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		441	25.2	138	4.98	4940	50.1	1830	24.9	1970	25.2
TPH by SW8015 Mod	***Extracted:***	Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00		Mar-25-19 10:00	
	Analyzed:	Mar-25-19 13:08		Mar-25-19 13:46		Mar-25-19 14:05		Mar-25-19 14:25		Mar-25-19 14:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		1180	74.8	<15.0	15.0	254	74.9	<14.9	14.9	1290	74.8
Diesel Range Organics (DRO)		9680	74.8	164	15.0	4350	74.9	190	14.9	7660	74.8
Motor Oil Range Hydrocarbons (MRO)		75.7	74.8	53.8	15.0	1750	74.9	70.4	14.9	<74.8	74.8
Total TPH		10900	74.8	218	15.0	6350	74.9	260	14.9	8950	74.8

Jessica Kramer
Project Assistant

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-001	Date Collected:	03.18.19 12.50	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**441**	25.2	mg/kg	03.21.19 16.35		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1180**	74.8	mg/kg	03.25.19 13.08		5
Diesel Range Organics (DRO)	C10C28DRO	**9680**	74.8	mg/kg	03.25.19 13.08		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**75.7**	74.8	mg/kg	03.25.19 13.08		5
Total TPH	PHC635	**10900**	74.8	mg/kg	03.25.19 13.08		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	03.25.19 13.08	
o-Terphenyl	84-15-1	127	%	70-135	03.25.19 13.08	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-001	Date Collected:	03.18.19 12.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.26.19 06.08	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.26.19 06.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	03.26.19 06.08	
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.26.19 06.08	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-002	Date Collected:	03.18.19 13.10	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**138**	4.98	mg/kg	03.21.19 16.45		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.25.19 13.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**164**	15.0	mg/kg	03.25.19 13.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**53.8**	15.0	mg/kg	03.25.19 13.46		1
Total TPH	PHC635	**218**	15.0	mg/kg	03.25.19 13.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	03.25.19 13.46	
o-Terphenyl	84-15-1	102	%	70-135	03.25.19 13.46	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-002	Date Collected:	03.18.19 13.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.114**	0.0199	mg/kg	03.26.19 08.59		10
Toluene	108-88-3	**0.0557**	0.0199	mg/kg	03.26.19 08.59		10
Ethylbenzene	100-41-4	**0.0970**	0.0199	mg/kg	03.26.19 08.59		10
m,p-Xylenes	179601-23-1	**1.06**	0.0398	mg/kg	03.26.19 08.59		10
o-Xylene	95-47-6	**0.572**	0.0199	mg/kg	03.26.19 08.59		10
Total Xylenes	1330-20-7	**1.63**	0.0199	mg/kg	03.26.19 08.59		10
Total BTEX		**1.90**	0.0199	mg/kg	03.26.19 08.59		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	123	%	70-130	03.26.19 08.59	
4-Bromofluorobenzene	460-00-4	293	%	70-130	03.26.19 08.59	**

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-003	Date Collected:	03.18.19 13.25	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4940**	50.1	mg/kg	03.21.19 16.55		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**254**	74.9	mg/kg	03.25.19 14.05		5
Diesel Range Organics (DRO)	C10C28DRO	**4350**	74.9	mg/kg	03.25.19 14.05		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1750**	74.9	mg/kg	03.25.19 14.05		5
Total TPH	PHC635	**6350**	74.9	mg/kg	03.25.19 14.05		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	03.25.19 14.05	
o-Terphenyl	84-15-1	148	%	70-135	03.25.19 14.05	**

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS05**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-003	Date Collected:	03.18.19 13.25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.110**	0.0200	mg/kg	03.26.19 08.40		10
Toluene	108-88-3	**0.0488**	0.0200	mg/kg	03.26.19 08.40		10
Ethylbenzene	100-41-4	**0.0652**	0.0200	mg/kg	03.26.19 08.40		10
m,p-Xylenes	179601-23-1	**0.463**	0.0400	mg/kg	03.26.19 08.40		10
o-Xylene	95-47-6	**0.270**	0.0200	mg/kg	03.26.19 08.40		10
Total Xylenes	1330-20-7	**0.733**	0.0200	mg/kg	03.26.19 08.40		10
Total BTEX		**0.957**	0.0200	mg/kg	03.26.19 08.40		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	185	%	70-130	03.26.19 08.40	**
1,4-Difluorobenzene	540-36-3	121	%	70-130	03.26.19 08.40	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-004	Date Collected:	03.18.19 13.35	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1830**	24.9	mg/kg	03.21.19 17.34		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	03.25.19 14.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	**190**	14.9	mg/kg	03.25.19 14.25		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**70.4**	14.9	mg/kg	03.25.19 14.25		1
Total TPH	PHC635	**260**	14.9	mg/kg	03.25.19 14.25		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	03.25.19 14.25	
o-Terphenyl	84-15-1	105	%	70-135	03.25.19 14.25	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS06**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-004	Date Collected:	03.18.19 13.35	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.26.19 06.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.26.19 06.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	03.26.19 06.27	
1,4-Difluorobenzene	540-36-3	98	%	70-130	03.26.19 06.27	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-005	Date Collected:	03.18.19 13.50	Sample Depth:	0.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.21.19 10.35	Basis:	Wet Weight
Seq Number:	3082988				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1970**	25.2	mg/kg	03.21.19 17.44		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.25.19 10.00	Basis:	Wet Weight
Seq Number:	3083359				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**1290**	74.8	mg/kg	03.25.19 14.44		5
Diesel Range Organics (DRO)	C10C28DRO	**7660**	74.8	mg/kg	03.25.19 14.44		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<74.8	74.8	mg/kg	03.25.19 14.44	U	5
Total TPH	PHC635	**8950**	74.8	mg/kg	03.25.19 14.44		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	03.25.19 14.44	
o-Terphenyl	84-15-1	102	%	70-135	03.25.19 14.44	

Certificate of Analytical Results 618270

LT Environmental, Inc., Arvada, CO

Remuda North 30 State 122H

Sample Id:	**SS07**	Matrix:	Soil	Date Received:	03.20.19 13.15
Lab Sample Id:	618270-005	Date Collected:	03.18.19 13.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.25.19 16.30	Basis:	Wet Weight
Seq Number:	3083412				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.26.19 07.24	U	1
Toluene	108-88-3	**0.0601**	0.00199	mg/kg	03.26.19 07.24		1
Ethylbenzene	100-41-4	**0.0851**	0.00199	mg/kg	03.26.19 07.24		1
m,p-Xylenes	179601-23-1	**0.434**	0.00398	mg/kg	03.26.19 07.24		1
o-Xylene	95-47-6	**0.221**	0.00199	mg/kg	03.26.19 07.24		1
Total Xylenes	1330-20-7	**0.655**	0.00199	mg/kg	03.26.19 07.24		1
Total BTEX		**0.800**	0.00199	mg/kg	03.26.19 07.24		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	437	%	70-130	03.26.19 07.24	**
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.26.19 07.24	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 618270

LT Environmental, Inc.

Remuda North 30 State 122H

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Solid Date Prep: 03.21.19
MB Sample Id: 7673994-1-BLK LCS Sample Id: 7673994-1-BKS LCSD Sample Id: 7673994-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	272	109	271	108	90-110	0	20	mg/kg	03.21.19 14:28	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-044 MS Sample Id: 618191-044 S MSD Sample Id: 618191-044 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	31.1	249	297	107	292	105	90-110	2	20	mg/kg	03.21.19 14:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3082988 Matrix: Soil Date Prep: 03.21.19
Parent Sample Id: 618191-045 MS Sample Id: 618191-045 S MSD Sample Id: 618191-045 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	102	250	368	106	366	106	90-110	1	20	mg/kg	03.21.19 17:14	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674329-1-BLK LCS Sample Id: 7674329-1-BKS LCSD Sample Id: 7674329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1050	105	1050	105	70-135	0	20	mg/kg	03.25.19 11:38	
Diesel Range Organics (DRO)	<8.13	1000	1020	102	1080	108	70-135	6	20	mg/kg	03.25.19 11:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		129		128		70-135	%	03.25.19 11:38
o-Terphenyl	107		113		120		70-135	%	03.25.19 11:38

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

QC Summary 618270

LT Environmental, Inc.

Remuda North 30 State 122H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083359 Matrix: Soil Date Prep: 03.25.19
Parent Sample Id: 618604-005 MS Sample Id: 618604-005 S MSD Sample Id: 618604-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1040	104	1050	105	70-135	1	20	mg/kg	03.25.19 20:28	
Diesel Range Organics (DRO)	22.5	998	1030	101	1040	102	70-135	1	20	mg/kg	03.25.19 20:28	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		119		70-135	%	03.25.19 20:28
o-Terphenyl	103		101		70-135	%	03.25.19 20:28

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083412 Matrix: Solid Date Prep: 03.25.19
MB Sample Id: 7674330-1-BLK LCS Sample Id: 7674330-1-BKS LCSD Sample Id: 7674330-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.107	107	0.111	111	70-130	4	35	mg/kg	03.26.19 00:11	
Toluene	<0.000454	0.0996	0.103	103	0.107	107	70-130	4	35	mg/kg	03.26.19 00:11	
Ethylbenzene	<0.000563	0.0996	0.110	110	0.113	113	70-130	3	35	mg/kg	03.26.19 00:11	
m,p-Xylenes	<0.00101	0.199	0.213	107	0.219	110	70-130	3	35	mg/kg	03.26.19 00:11	
o-Xylene	<0.000343	0.0996	0.110	110	0.115	115	70-130	4	35	mg/kg	03.26.19 00:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		102		104		70-130	%	03.26.19 00:11
4-Bromofluorobenzene	102		110		120		70-130	%	03.26.19 00:11

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3083412 Matrix: Soil Date Prep: 03.25.19
Parent Sample Id: 618793-001 MS Sample Id: 618793-001 S MSD Sample Id: 618793-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.103	104	0.106	106	70-130	3	35	mg/kg	03.26.19 00:49	
Toluene	<0.000453	0.0994	0.0988	99	0.103	103	70-130	4	35	mg/kg	03.26.19 00:49	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.107	107	70-130	3	35	mg/kg	03.26.19 00:49	
m,p-Xylenes	<0.00101	0.199	0.201	101	0.208	103	70-130	3	35	mg/kg	03.26.19 00:49	
o-Xylene	<0.000342	0.0994	0.105	106	0.112	112	70-130	6	35	mg/kg	03.26.19 00:49	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		105		70-130	%	03.26.19 00:49
4-Bromofluorobenzene	119		123		70-130	%	03.26.19 00:49

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 618270

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Remuda North 30 State 122H	Turn Around	
Project Number:		Routine	☑
P.O. Number:	3/1/19, 3/2/19	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.1/2.0	Thermometer ID	RE	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.1	
Sample Custody Seals:	Yes No (N/A)	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01	S	3/18/19	1250	.5'	1	X	X	X
SS02	S		1310		1	X	X	X
SS03	S		1325		1	X	X	X
SS04	S		1335		1	X	X	X
SS05	S		1350		1	X	X	X

Work Order Notes

(32.274827, -103.927638)

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

Sample Comments

Discrete

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			1710 - 3/18/19	2		03/18/19 17:20
3			3/20/19 1315	4		
5				6		

Revised Date 051418 Rev. 2018.1

7747 4521 7224

Analytical Report 632823

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda N30 State 111H

012919033

08-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

08-AUG-19

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

Reference: XENCO Report No(s): **632823**
Remuda N30 State 111H
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 632823. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 632823 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	07-30-19 12:50	1 ft	632823-001
PH01A	S	07-30-19 13:16	6 ft	632823-002
PH02	S	07-30-19 13:39	1 ft	632823-003
PH02A	S	07-30-19 13:52	4 ft	632823-004
PH03	S	07-30-19 14:13	1 ft	632823-005
PH03A	S	07-30-19 14:25	4 ft	632823-006
PH04	S	07-30-19 14:42	2 ft	632823-007
PH04A	S	07-30-19 14:49	4 ft	632823-008
PH05	S	07-31-19 09:24	1 ft	632823-009
PH05A	S	07-31-19 09:37	4 ft	632823-010
PH06	S	07-31-19 09:55	1 ft	632823-011
PH06A	S	07-31-19 10:03	2 ft	632823-012
PH07	S	07-31-19 10:19	1 ft	632823-013
PH07A	S	07-31-19 10:26	2 ft	632823-014
PH08	S	07-31-19 10:44	1 ft	632823-015
PH08A	S	07-31-19 10:49	2 ft	632823-016
PH09	S	07-31-19 11:07	1 ft	632823-017
PH09A	S	07-31-19 11:13	2 ft	632823-018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3097737 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 632823-014,632823-018,632823-017.

Batch: LBA-3097849 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 632823

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-01-19 03:00 pm
Report Date: 08-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	632823-001		632823-002		632823-003		632823-004		632823-005		632823-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	1- ft		6- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-30-19 12:50		Jul-30-19 13:16		Jul-30-19 13:39		Jul-30-19 13:52		Jul-30-19 14:13		Jul-30-19 14:25	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
	Analyzed:	Aug-07-19 02:38		Aug-07-19 02:58		Aug-07-19 03:19		Aug-07-19 03:39		Aug-07-19 03:59		Aug-07-19 04:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00396	0.00396	<0.00400	0.00400	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 09:15	
	Analyzed:	Aug-06-19 11:35		Aug-06-19 11:52		Aug-06-19 11:57		Aug-06-19 12:03		Aug-06-19 12:08		Aug-06-19 12:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1050	5.00	<4.97	4.97	44.2	5.00	23.4	4.99	136	4.96	<4.96	4.96
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
	Analyzed:	Aug-06-19 11:23		Aug-06-19 11:46		Aug-06-19 12:09		Aug-06-19 12:32		Aug-06-19 12:55		Aug-06-19 13:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		55.7	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		16.7	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		72.4	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		55.7	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 632823

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-01-19 03:00 pm
Report Date: 08-AUG-19
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	632823-007		632823-008		632823-009		632823-010		632823-011		632823-012	
	Field Id:	PH04		PH04A		PH05		PH05A		PH06		PH06A	
	Depth:	2- ft		4- ft		1- ft		4- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-30-19 14:42		Jul-30-19 14:49		Jul-31-19 09:24		Jul-31-19 09:37		Jul-31-19 09:55		Jul-31-19 10:03	
BTEX by EPA 8021B	*Extracted:*	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
SUB: T104704400-18-16	*Analyzed:*	Aug-07-19 04:39		Aug-07-19 04:59		Aug-07-19 05:19		Aug-07-19 05:40		Aug-07-19 06:58		Aug-07-19 07:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00397	0.00397	<0.00401	0.00401	<0.00399	0.00399	<0.00399	0.00399	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 09:15		Aug-06-19 10:20		Aug-06-19 10:20		Aug-06-19 10:20	
SUB: T104704400-18-16	*Analyzed:*	Aug-06-19 12:20		Aug-06-19 12:25		Aug-06-19 12:31		Aug-06-19 13:16		Aug-06-19 13:33		Aug-06-19 13:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.01	5.01	<5.03	5.03	114	5.02	5.58	4.99	19.6	4.96	20.7	5.01
TPH by SW8015 Mod	*Extracted:*	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
SUB: T104704400-18-16	*Analyzed:*	Aug-06-19 13:41		Aug-06-19 14:05		Aug-06-19 14:28		Aug-06-19 15:15		Aug-06-19 15:38		Aug-06-19 16:02	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.6	14.6	<15.0	15.0
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.6	14.6	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.6	14.6	<15.0	15.0
Total TPH		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.6	14.6	<15.0	15.0
Total GRO-DRO		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.6	14.6	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 632823

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-01-19 03:00 pm
Report Date: 08-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	632823-013		632823-014		632823-015		632823-016		632823-017		632823-018	
	Field Id:	PH07		PH07A		PH08		PH08A		PH09		PH09A	
	Depth:	1- ft		2- ft		1- ft		2- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-31-19 10:19		Jul-31-19 10:26		Jul-31-19 10:44		Jul-31-19 10:49		Jul-31-19 11:07		Jul-31-19 11:13	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
	Analyzed:	Aug-07-19 07:38		Aug-07-19 07:58		Aug-07-19 08:19		Aug-07-19 08:39		Aug-07-19 08:59		Aug-07-19 09:19	
	Units/RL:	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	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00396	0.00396	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00398	0.00398	<0.00399	0.00399
o-Xylene		<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00198	0.00198	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-06-19 10:20		Aug-06-19 10:20		Aug-06-19 10:20		Aug-06-19 10:20		Aug-06-19 10:20		Aug-06-19 10:20	
	Analyzed:	Aug-06-19 13:43		Aug-06-19 13:49		Aug-06-19 14:05		Aug-06-19 14:10		Aug-06-19 14:16		Aug-06-19 14:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<5.03	5.03	<5.00	5.00	<5.00	5.00	<5.04	5.04	17.5	5.03	<4.97	4.97
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00		Aug-05-19 11:00	
	Analyzed:	Aug-06-19 16:26		Aug-06-19 16:49		Aug-06-19 17:13		Aug-06-19 17:36		Aug-06-19 18:00		Aug-06-19 18:47	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		31.5	14.9	<15.0	15.0	22.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		31.5	14.9	<15.0	15.0	22.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		31.5	14.9	<15.0	15.0	22.9	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-001	Date Collected:	07.30.19 12.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1050**	5.00	mg/kg	08.06.19 11.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 11.23	U	1
Diesel Range Organics (DRO)	C10C28DRO	**55.7**	15.0	mg/kg	08.06.19 11.23		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.7**	15.0	mg/kg	08.06.19 11.23		1
Total TPH	PHC635	**72.4**	15.0	mg/kg	08.06.19 11.23		1
Total GRO-DRO	PHC628	**55.7**	15.0	mg/kg	08.06.19 11.23		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.06.19 11.23	
o-Terphenyl	84-15-1	77	%	70-135	08.06.19 11.23	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-001	Date Collected:	07.30.19 12.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.19 02.38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.19 02.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.07.19 02.38	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.19 02.38	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-002	Date Collected:	07.30.19 13.16	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.06.19 11.52	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.06.19 11.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.06.19 11.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.06.19 11.46	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.06.19 11.46	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.06.19 11.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.06.19 11.46	
o-Terphenyl	84-15-1	70	%	70-135	08.06.19 11.46	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-002	Date Collected:	07.30.19 13.16	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.19 02.58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.19 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.07.19 02.58	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.19 02.58	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-003	Date Collected:	07.30.19 13.39	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.2**	5.00	mg/kg	08.06.19 11.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 12.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 12.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 12.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 12.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 12.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	08.06.19 12.09	
o-Terphenyl	84-15-1	71	%	70-135	08.06.19 12.09	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-003	Date Collected:	07.30.19 13.39	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.19 03.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 03.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	08.07.19 03.19	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.07.19 03.19	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-004	Date Collected:	07.30.19 13.52	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.4**	4.99	mg/kg	08.06.19 12.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 12.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 12.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 12.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 12.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 12.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	08.06.19 12.32	
o-Terphenyl	84-15-1	88	%	70-135	08.06.19 12.32	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-004	Date Collected:	07.30.19 13.52	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 03.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 03.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.07.19 03.39	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.07.19 03.39	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-005	Date Collected:	07.30.19 14.13	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**136**	4.96	mg/kg	08.06.19 12.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 12.55	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 12.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 12.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 12.55	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 12.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.19 12.55	
o-Terphenyl	84-15-1	78	%	70-135	08.06.19 12.55	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-005	Date Collected:	07.30.19 14.13	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 03.59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 03.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.07.19 03.59	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.07.19 03.59	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-006	Date Collected:	07.30.19 14.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.06.19 12.14	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 13.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 13.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 13.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 13.18	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 13.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.06.19 13.18	
o-Terphenyl	84-15-1	82	%	70-135	08.06.19 13.18	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-006	Date Collected:	07.30.19 14.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 04.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 04.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.07.19 04.19	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.07.19 04.19	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-007	Date Collected:	07.30.19 14.42	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	08.06.19 12.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.06.19 13.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.06.19 13.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.06.19 13.41	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.06.19 13.41	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	08.06.19 13.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.19 13.41	
o-Terphenyl	84-15-1	76	%	70-135	08.06.19 13.41	

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Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-007	Date Collected:	07.30.19 14.42	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.19 04.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.19 04.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.19 04.39	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.19 04.39	

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Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-008	Date Collected:	07.30.19 14.49	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.06.19 12.25	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 14.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 14.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 14.05	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 14.05	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 14.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.06.19 14.05	
o-Terphenyl	84-15-1	70	%	70-135	08.06.19 14.05	

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Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-008	Date Collected:	07.30.19 14.49	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.19 04.59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 04.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.07.19 04.59	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.07.19 04.59	

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Sample Id:	**PH05**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-009	Date Collected:	07.31.19 09.24	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 09.15	Basis:	Wet Weight
Seq Number:	3097697			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**114**	5.02	mg/kg	08.06.19 12.31		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 14.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 14.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 14.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 14.28	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 14.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.19 14.28	
o-Terphenyl	84-15-1	88	%	70-135	08.06.19 14.28	

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Sample Id:	**PH05**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-009	Date Collected:	07.31.19 09.24	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.19 05.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 05.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.07.19 05.19	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.19 05.19	

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Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-010	Date Collected:	07.31.19 09.37	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.58**	4.99	mg/kg	08.06.19 13.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 15.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 15.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 15.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 15.15	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 15.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.06.19 15.15	
o-Terphenyl	84-15-1	72	%	70-135	08.06.19 15.15	

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Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-010	Date Collected:	07.31.19 09.37	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.19 05.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 05.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.19 05.40	
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.07.19 05.40	

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Sample Id:	**PH06**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-011	Date Collected:	07.31.19 09.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.6**	4.96	mg/kg	08.06.19 13.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.6	14.6	mg/kg	08.06.19 15.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.6	14.6	mg/kg	08.06.19 15.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.6	14.6	mg/kg	08.06.19 15.38	U	1
Total TPH	PHC635	<14.6	14.6	mg/kg	08.06.19 15.38	U	1
Total GRO-DRO	PHC628	<14.6	14.6	mg/kg	08.06.19 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.06.19 15.38	
o-Terphenyl	84-15-1	79	%	70-135	08.06.19 15.38	

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Sample Id:	**PH06**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-011	Date Collected:	07.31.19 09.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.19 06.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 06.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.19 06.58	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.07.19 06.58	

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Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-012	Date Collected:	07.31.19 10.03	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**20.7**	5.01	mg/kg	08.06.19 13.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 16.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 16.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 16.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 16.02	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 16.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	08.06.19 16.02	
o-Terphenyl	84-15-1	88	%	70-135	08.06.19 16.02	

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Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-012	Date Collected:	07.31.19 10.03	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 07.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 07.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.07.19 07.18	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.19 07.18	

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Sample Id:	**PH07**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-013	Date Collected:	07.31.19 10.19	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.06.19 13.43	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.06.19 16.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**31.5**	14.9	mg/kg	08.06.19 16.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	08.06.19 16.26	U	1
Total TPH	PHC635	**31.5**	14.9	mg/kg	08.06.19 16.26		1
Total GRO-DRO	PHC628	**31.5**	14.9	mg/kg	08.06.19 16.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.06.19 16.26	
o-Terphenyl	84-15-1	74	%	70-135	08.06.19 16.26	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-013	Date Collected:	07.31.19 10.19	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.19 07.38	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.19 07.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.19 07.38	
4-Bromofluorobenzene	460-00-4	118	%	70-130	08.07.19 07.38	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-014	Date Collected:	07.31.19 10.26	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.06.19 13.49	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 16.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 16.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 16.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 16.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 16.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.06.19 16.49	
o-Terphenyl	84-15-1	67	%	70-135	08.06.19 16.49	**

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-014	Date Collected:	07.31.19 10.26	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 07.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 07.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.19 07.58	
4-Bromofluorobenzene	460-00-4	108	%	70-130	08.07.19 07.58	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-015	Date Collected:	07.31.19 10.44	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.06.19 14.05	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 17.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	**22.9**	15.0	mg/kg	08.06.19 17.13		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 17.13	U	1
Total TPH	PHC635	**22.9**	15.0	mg/kg	08.06.19 17.13		1
Total GRO-DRO	PHC628	**22.9**	15.0	mg/kg	08.06.19 17.13		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.06.19 17.13	
o-Terphenyl	84-15-1	72	%	70-135	08.06.19 17.13	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-015	Date Collected:	07.31.19 10.44	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 08.19	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 08.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.19 08.19	
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.07.19 08.19	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-016	Date Collected:	07.31.19 10.49	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	08.06.19 14.10	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 17.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 17.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 17.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 17.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 17.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.06.19 17.36	
o-Terphenyl	84-15-1	74	%	70-135	08.06.19 17.36	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-016	Date Collected:	07.31.19 10.49	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 08.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 08.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	81	%	70-130	08.07.19 08.39	
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.07.19 08.39	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-017	Date Collected:	07.31.19 11.07	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.5**	5.03	mg/kg	08.06.19 14.16		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 18.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 18.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 18.00	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 18.00	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.06.19 18.00	
o-Terphenyl	84-15-1	68	%	70-135	08.06.19 18.00	**

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-017	Date Collected:	07.31.19 11.07	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.19 08.59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.19 08.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.07.19 08.59	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.07.19 08.59	

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-018	Date Collected:	07.31.19 11.13	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.19 10.20	Basis:	Wet Weight
Seq Number:	3097699			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.06.19 14.21	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097737			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.06.19 18.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.06.19 18.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	08.06.19 18.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.06.19 18.47	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	08.06.19 18.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.06.19 18.47	
o-Terphenyl	84-15-1	64	%	70-135	08.06.19 18.47	**

Certificate of Analytical Results 632823

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	08.01.19 15.00
Lab Sample Id:	632823-018	Date Collected:	07.31.19 11.13	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	ALG	Date Prep:	08.05.19 11.00	Basis:	Wet Weight
Seq Number:	3097849			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.19 09.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.19 09.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.07.19 09.19	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.07.19 09.19	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 632823

LT Environmental, Inc.

Remuda N30 State 111H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097697 Matrix: Solid Date Prep: 08.06.19
MB Sample Id: 7683581-1-BLK LCS Sample Id: 7683581-1-BKS LCSD Sample Id: 7683581-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	263	105	259	104	90-110	2	20	mg/kg	08.06.19 09:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097699 Matrix: Solid Date Prep: 08.06.19
MB Sample Id: 7683582-1-BLK LCS Sample Id: 7683582-1-BKS LCSD Sample Id: 7683582-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	251	100	251	100	90-110	0	20	mg/kg	08.06.19 13:05	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097697 Matrix: Soil Date Prep: 08.06.19
Parent Sample Id: 632819-002 MS Sample Id: 632819-002 S MSD Sample Id: 632819-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	403	252	667	105	677	109	90-110	1	20	mg/kg	08.06.19 10:00	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097697 Matrix: Soil Date Prep: 08.06.19
Parent Sample Id: 632819-012 MS Sample Id: 632819-012 S MSD Sample Id: 632819-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	285	250	556	108	560	110	90-110	1	20	mg/kg	08.06.19 11:24	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097699 Matrix: Soil Date Prep: 08.06.19
Parent Sample Id: 632823-010 MS Sample Id: 632823-010 S MSD Sample Id: 632823-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.58	250	258	101	259	101	90-110	0	20	mg/kg	08.06.19 13:22	

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

QC Summary 632823

LT Environmental, Inc.

Remuda N30 State 111H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3097699 Matrix: Soil Date Prep: 08.06.19
Parent Sample Id: 632879-002 MS Sample Id: 632879-002 S MSD Sample Id: 632879-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	506	251	751	98	753	98	90-110	0	20	mg/kg	08.06.19 14:38	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3097737 Matrix: Solid Date Prep: 08.05.19
MB Sample Id: 7683534-1-BLK LCS Sample Id: 7683534-1-BKS LCSD Sample Id: 7683534-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1130	113	70-135	5	20	mg/kg	08.06.19 09:26	
Diesel Range Organics (DRO)	<8.13	1000	1150	115	1200	120	70-135	4	20	mg/kg	08.06.19 09:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		92		99		70-135	%	08.06.19 09:26
o-Terphenyl	76		94		104		70-135	%	08.06.19 09:26

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3097737 Matrix: Soil Date Prep: 08.05.19
Parent Sample Id: 632815-001 MS Sample Id: 632815-001 S MSD Sample Id: 632815-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	20.5	997	1050	103	1020	100	70-135	3	20	mg/kg	08.06.19 10:35	
Diesel Range Organics (DRO)	591	997	1520	93	1540	95	70-135	1	20	mg/kg	08.06.19 10:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		91		70-135	%	08.06.19 10:35
o-Terphenyl	84		81		70-135	%	08.06.19 10:35

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

QC Summary 632823

LT Environmental, Inc.

Remuda N30 State 111H

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

Seq Number: 3097849 Matrix: Solid Date Prep: 08.05.19

MB Sample Id: 7683494-1-BLK LCS Sample Id: 7683494-1-BKS LCSD Sample Id: 7683494-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000400	0.100	0.0937	94	0.100	100	70-130	7	35	mg/kg	08.07.19 00:38	
Toluene	0.000470	0.100	0.0852	85	0.0919	92	70-130	8	35	mg/kg	08.07.19 00:38	
Ethylbenzene	<0.000565	0.100	0.0842	84	0.0910	91	70-130	8	35	mg/kg	08.07.19 00:38	
m,p-Xylenes	<0.00101	0.200	0.167	84	0.182	91	70-130	9	35	mg/kg	08.07.19 00:38	
o-Xylene	<0.000344	0.100	0.0872	87	0.0957	96	70-130	9	35	mg/kg	08.07.19 00:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		102		70-130	%	08.07.19 00:38
4-Bromofluorobenzene	105		99		107		70-130	%	08.07.19 00:38

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

Seq Number: 3097849 Matrix: Soil Date Prep: 08.05.19

Parent Sample Id: 632823-001 MS Sample Id: 632823-001 S MSD Sample Id: 632823-001 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	0.0835	84	0.0881	88	70-130	5	35	mg/kg	08.07.19 01:19	
Toluene	<0.000454	0.0996	0.0787	79	0.0809	81	70-130	3	35	mg/kg	08.07.19 01:19	
Ethylbenzene	<0.00199	0.0996	0.0777	78	0.0792	79	70-130	2	35	mg/kg	08.07.19 01:19	
m,p-Xylenes	<0.00101	0.199	0.153	77	0.157	79	70-130	3	35	mg/kg	08.07.19 01:19	
o-Xylene	<0.00199	0.0996	0.0806	81	0.0829	83	70-130	3	35	mg/kg	08.07.19 01:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		103		70-130	%	08.07.19 01:19
4-Bromofluorobenzene	106		107		70-130	%	08.07.19 01:19

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

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

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

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

Chain of Custody

Work Order No: 632823

XENCO LABORATORIES

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

www.xenco.com Page 1 of 2

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

Work Order Comments

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

Project Name:	Remuda N30State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.0	Thermometer ID	TNM007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	18	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH01	S	07/30/19	1250	1'	1	X	X	X
PH01A		07/30/19	1316	6'				
PH02		07/30/19	1339	1'				
PH02A		07/30/19	1352	4'				
PH03		07/30/19	1413	1'				
PH03A		07/30/19	1425	4'				
PH04		07/30/19	1442	2'				
PH04A		07/30/19	1449	4'				
PH05	↓	07/31/19	0924	1'	↓	↓	↓	↓
PH05A	S	07/31/19	0937	4'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		08/01/2019 14:35	2		08/01/2019 15:00
3			4		
5			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

Work Order No: 632823

XENCO LABORATORIES

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

www.xenco.com Page 2 of 2

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

Work Order Comments

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

Project Name:	Remuda N 30 State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH06	S	07/31/19	0955	1'	1	X	X	X
PH06A			1003	2'				
PH07			1019	1'				
PH07A			1026	2'				
PH08			1044	1'				
PH08A			1049	2'				
PH09	↓	↓	1107	1'	↓	↓	↓	↓
PH09A	S	07/31/19	1113	2'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			08/01/2019 14:35	2		08/01/19 15:10
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Inter-Office Shipment

IOS Number **45495**

Date/Time: 08/02/19 10:33
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632823-001	S	PH01	07/30/19 12:50	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-001	S	PH01	07/30/19 12:50	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-001	S	PH01	07/30/19 12:50	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-002	S	PH01A	07/30/19 13:16	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-002	S	PH01A	07/30/19 13:16	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-002	S	PH01A	07/30/19 13:16	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-003	S	PH02	07/30/19 13:39	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-003	S	PH02	07/30/19 13:39	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-003	S	PH02	07/30/19 13:39	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-004	S	PH02A	07/30/19 13:52	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-004	S	PH02A	07/30/19 13:52	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-004	S	PH02A	07/30/19 13:52	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-005	S	PH03	07/30/19 14:13	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-005	S	PH03	07/30/19 14:13	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-005	S	PH03	07/30/19 14:13	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-006	S	PH03A	07/30/19 14:25	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-006	S	PH03A	07/30/19 14:25	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-006	S	PH03A	07/30/19 14:25	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-007	S	PH04	07/30/19 14:42	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-007	S	PH04	07/30/19 14:42	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-007	S	PH04	07/30/19 14:42	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-008	S	PH04A	07/30/19 14:49	E300_CL	Chloride by EPA 300	08/07/19	01/26/20	JKR	CL	
632823-008	S	PH04A	07/30/19 14:49	SW8021B	BTEX by EPA 8021B	08/07/19	08/13/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-008	S	PH04A	07/30/19 14:49	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/13/19	JKR	GRO-DRO PHCC10C28 PI	
632823-009	S	PH05	07/31/19 09:24	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter-Office Shipment

IOS Number **45495**

Date/Time: 08/02/19 10:33
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632823-009	S	PH05	07/31/19 09:24	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-009	S	PH05	07/31/19 09:24	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-010	S	PH05A	07/31/19 09:37	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-010	S	PH05A	07/31/19 09:37	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-010	S	PH05A	07/31/19 09:37	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-011	S	PH06	07/31/19 09:55	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-011	S	PH06	07/31/19 09:55	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-011	S	PH06	07/31/19 09:55	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-012	S	PH06A	07/31/19 10:03	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-012	S	PH06A	07/31/19 10:03	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-012	S	PH06A	07/31/19 10:03	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-013	S	PH07	07/31/19 10:19	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-013	S	PH07	07/31/19 10:19	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-013	S	PH07	07/31/19 10:19	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-014	S	PH07A	07/31/19 10:26	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-014	S	PH07A	07/31/19 10:26	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-014	S	PH07A	07/31/19 10:26	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-015	S	PH08	07/31/19 10:44	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-015	S	PH08	07/31/19 10:44	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-015	S	PH08	07/31/19 10:44	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-016	S	PH08A	07/31/19 10:49	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-016	S	PH08A	07/31/19 10:49	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-016	S	PH08A	07/31/19 10:49	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-017	S	PH09	07/31/19 11:07	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-017	S	PH09	07/31/19 11:07	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **45495**

Date/Time: 08/02/19 10:33
Lab# From: **Carlsbad**
Lab# To: **Midland**

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

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
632823-017	S	PH09	07/31/19 11:07	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	
632823-018	S	PH09A	07/31/19 11:13	SW8021B	BTEX by EPA 8021B	08/07/19	08/14/19	JKR	BR4FBZ BZ BZME EBZ X	
632823-018	S	PH09A	07/31/19 11:13	E300_CL	Chloride by EPA 300	08/07/19	01/27/20	JKR	CL	
632823-018	S	PH09A	07/31/19 11:13	SW8015MOD_NM	TPH by SW8015 Mod	08/07/19	08/14/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/02/2019

Received By: Katie Lowe

Date Received:

Cooler Temperature:

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 45495

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

Sent By: Elizabeth McClellan **Date Sent:** 08/02/2019 10:33 AM

Received By: **Date Received:**

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: _____ Date: _____
Katie Lowe

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/01/2019 03:00:00 PM

Work Order #: 632823

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/02/2019

Checklist reviewed by: Jessica Kramer Date: 08/02/2019

Analytical Report 634142

for

LT Environmental, Inc.

Project Manager: Dan Moir

Remuda N30 State 111H

012919033

26-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

26-AUG-19

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

Reference: XENCO Report No(s): **634142**
Remuda N30 State 111H
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 634142. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 634142 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW01	S	08-12-19 15:10	0 - 3 ft	634142-001
SW02	S	08-12-19 15:12	0 - 3 ft	634142-002
SW03	S	08-12-19 15:40	0 - 3 ft	634142-003
SW04	S	08-13-19 12:45	0 - 3 ft	634142-004
FS01	S	08-13-19 13:01	3 ft	634142-005
FS02	S	08-13-19 13:13	3 ft	634142-006
FS03	S	08-13-19 13:23	3 ft	634142-007
FS04	S	08-13-19 13:27	3 ft	634142-008
FS05	S	08-13-19 13:51	3 ft	634142-009
FS06	S	08-13-19 14:01	3 ft	634142-010
FS07	S	08-13-19 14:28	3 ft	634142-011
FS08	S	08-13-19 14:42	3 ft	634142-012
FS09	S	08-13-19 14:44	3 ft	634142-013
FS10	S	08-13-19 15:09	3 ft	634142-014
FS11	S	08-13-19 15:11	3 ft	634142-015
FS12	S	08-13-19 15:15	3 ft	634142-016
FS13	S	08-13-19 15:24	3 ft	634142-017
FS14	S	08-13-19 15:26	3 ft	634142-018
FS15	S	08-13-19 15:29	3 ft	634142-019
FS16	S	08-13-19 15:43	3 ft	634142-020
FS17	S	08-13-19 15:46	3 ft	634142-021
FS18	S	08-13-19 15:50	3 ft	634142-022
FS19	S	08-13-19 16:07	3 ft	634142-023
FS20	S	08-13-19 16:10	3 ft	634142-024
FS21	S	08-13-19 16:15	3 ft	634142-025

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3099030 BTEX by EPA 8021B
Lab Sample ID 634142-014 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 634142-014, -015, -016, -017, -018, -019, -020, -021, -022, -023, -024, -025.
The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3099491 BTEX by EPA 8021B
BKS was re-ran due to not being spiked on initial run.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 634142

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 08:45 am
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634142-001		634142-002		634142-003		634142-004		634142-005		634142-006	
	Field Id:	SW01		SW02		SW03		SW04		FS01		FS02	
	Depth:	0-3 ft		0-3 ft		0-3 ft		0-3 ft		3- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-12-19 15:10		Aug-12-19 15:12		Aug-12-19 15:40		Aug-13-19 12:45		Aug-13-19 13:01		Aug-13-19 13:13	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00	
	Analyzed:	Aug-22-19 09:40		Aug-22-19 10:00		Aug-22-19 10:20		Aug-22-19 11:43		Aug-22-19 12:04		Aug-22-19 12:25	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
m,p-Xylenes		<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400	<0.00398	0.00398	<0.00397	0.00397	<0.00396	0.00396
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00198	0.00198
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-16-19 11:30		Aug-16-19 11:30		Aug-16-19 11:30		Aug-16-19 11:30		Aug-16-19 11:30		Aug-16-19 11:30	
	Analyzed:	Aug-16-19 18:58		Aug-16-19 19:04		Aug-16-19 19:11		Aug-16-19 19:17		Aug-16-19 19:23		Aug-16-19 19:30	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		66.3	5.02	44.7	4.98	70.1	4.97	271	5.05	17.0	4.95	26.6	4.95
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00	
	Analyzed:	Aug-16-19 12:33		Aug-16-19 13:31		Aug-16-19 13:50		Aug-16-19 14:09		Aug-16-19 14:28		Aug-16-19 14:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0
Total TPH		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0
Total GRO-DRO		<25.0	25.0	<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0

Certificate of Analysis Summary 634142

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 08:45 am
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634142-007		634142-008		634142-009		634142-010		634142-011		634142-012	
	Field Id:	FS03		FS04		FS05		FS06		FS07		FS08	
	Depth:	3- ft		3- ft		3- ft		3- ft		3- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-13-19 13:23		Aug-13-19 13:27		Aug-13-19 13:51		Aug-13-19 14:01		Aug-13-19 14:28		Aug-13-19 14:42	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00		Aug-16-19 15:00	
	Analyzed:	Aug-22-19 12:45		Aug-22-19 01:05		Aug-22-19 07:30		Aug-22-19 01:48		Aug-22-19 02:09		Aug-22-19 02:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00400	0.00400	<0.00398	0.00398	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-16-19 11:30		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00	
	Analyzed:	Aug-16-19 19:36		Aug-16-19 20:14		Aug-16-19 20:33		Aug-16-19 20:39		Aug-16-19 20:46		Aug-16-19 20:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		462	5.04	5.44	4.96	40.4	5.00	273	4.98	11.6	5.03	170	4.99
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00	
	Analyzed:	Aug-16-19 15:07		Aug-16-19 15:26		Aug-16-19 15:45		Aug-16-19 16:05		Aug-16-19 16:43		Aug-17-19 16:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Diesel Range Organics (DRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Motor Oil Range Hydrocarbons (MRO)		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total TPH		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0
Total GRO-DRO		<24.9	24.9	<25.0	25.0	<24.9	24.9	<25.0	25.0	<25.0	25.0	<25.0	25.0

Certificate of Analysis Summary 634142

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 08:45 am
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634142-013		634142-014		634142-015		634142-016		634142-017		634142-018	
	Field Id:	FS09		FS10		FS11		FS12		FS13		FS14	
	Depth:	3- ft		3- ft		3- ft		3- ft		3- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-13-19 14:44		Aug-13-19 15:09		Aug-13-19 15:11		Aug-13-19 15:15		Aug-13-19 15:24		Aug-13-19 15:26	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-16-19 15:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00	
	Analyzed:	Aug-22-19 02:51		Aug-17-19 00:13		Aug-17-19 00:33		Aug-17-19 00:53		Aug-17-19 01:14		Aug-17-19 01:34	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401	<0.00399	0.00399	<0.00400	0.00400	<0.00400	0.00400
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00	
	Analyzed:	Aug-16-19 21:11		Aug-16-19 21:17		Aug-16-19 21:23		Aug-16-19 21:30		Aug-16-19 21:36		Aug-16-19 21:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		168	4.97	122	5.01	115	5.05	110	4.98	15.1	5.02	12.3	5.00
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00	
	Analyzed:	Aug-16-19 17:22		Aug-16-19 17:41		Aug-16-19 18:01		Aug-16-19 18:20		Aug-16-19 18:39		Aug-16-19 18:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9
Diesel Range Organics (DRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9
Total TPH		<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9
Total GRO-DRO		<25.0	25.0	<24.9	24.9	<24.9	24.9	<25.0	25.0	<25.0	25.0	<24.9	24.9

Certificate of Analysis Summary 634142

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 08:45 am
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	634142-019		634142-020		634142-021		634142-022		634142-023		634142-024	
	Field Id:	FS15		FS16		FS17		FS18		FS19		FS20	
	Depth:	3- ft		3- ft		3- ft		3- ft		3- ft		3- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-13-19 15:29		Aug-13-19 15:43		Aug-13-19 15:46		Aug-13-19 15:50		Aug-13-19 16:07		Aug-13-19 16:10	
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00		Aug-16-19 14:00	
	Analyzed:	Aug-17-19 01:54		Aug-17-19 02:14		Aug-17-19 02:34		Aug-17-19 02:54		Aug-17-19 03:14		Aug-17-19 04:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00398	0.00398	<0.00397	0.00397	<0.00400	0.00400	<0.00403	0.00403
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00199	0.00199	<0.00198	0.00198	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00		Aug-16-19 13:00	
	Analyzed:	Aug-16-19 22:01		Aug-16-19 22:08		Aug-16-19 22:27		Aug-16-19 22:33		Aug-16-19 22:39		Aug-16-19 22:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		9.38	5.03	9.30	4.96	12.8	4.99	8.92	4.97	<4.96	4.96	<5.03	5.03
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00		Aug-16-19 09:00	
	Analyzed:	Aug-16-19 19:18		Aug-16-19 19:37		Aug-16-19 22:12		Aug-16-19 22:31		Aug-16-19 22:50		Aug-16-19 23:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9
Diesel Range Organics (DRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9
Motor Oil Range Hydrocarbons (MRO)		<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9
Total TPH		<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9
Total GRO-DRO		<25.0	25.0	<25.0	25.0	<25.0	25.0	<24.9	24.9	<25.0	25.0	<24.9	24.9

Certificate of Analysis Summary 634142

LT Environmental, Inc., Arvada, CO

Project Name: Remuda N30 State 111H

Project Id: 012919033
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu Aug-15-19 08:45 am
Report Date: 26-AUG-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	634142-025					
	Field Id:	FS21					
	Depth:	3- ft					
	Matrix:	SOIL					
	Sampled:	Aug-13-19 16:15					
BTEX by EPA 8021B	***Extracted:***	Aug-16-19 14:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-17-19 04:53					
	Units/RL:	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00399 0.00399					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	***Extracted:***	Aug-16-19 13:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-16-19 22:52					
	Units/RL:	mg/kg RL					
Chloride		5.79 4.95					
TPH by SW8015 Mod	***Extracted:***	Aug-16-19 09:00					
SUB: T104704400-18-16	***Analyzed:***	Aug-16-19 23:29					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<25.0 25.0					
Diesel Range Organics (DRO)		<25.0 25.0					
Motor Oil Range Hydrocarbons (MRO)		<25.0 25.0					
Total TPH		<25.0 25.0					
Total GRO-DRO		<25.0 25.0					

Jessica Kramer
Project Assistant

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-001	Date Collected:	08.12.19 15.10	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**66.3**	5.02	mg/kg	08.16.19 18.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 12.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 12.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 12.33	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 12.33	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 12.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	08.16.19 12.33	
o-Terphenyl	84-15-1	78	%	70-135	08.16.19 12.33	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-001	Date Collected:	08.12.19 15.10	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 09.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 09.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.22.19 09.40	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.22.19 09.40	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-002	Date Collected:	08.12.19 15.12	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**44.7**	4.98	mg/kg	08.16.19 19.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 13.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 13.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 13.31	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 13.31	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 13.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 13.31	
o-Terphenyl	84-15-1	80	%	70-135	08.16.19 13.31	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-002	Date Collected:	08.12.19 15.12	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.22.19 10.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.22.19 10.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	08.22.19 10.00	
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.22.19 10.00	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-003	Date Collected:	08.12.19 15.40	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**70.1**	4.97	mg/kg	08.16.19 19.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 13.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 13.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 13.50	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 13.50	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 13.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 13.50	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 13.50	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-003	Date Collected:	08.12.19 15.40	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 10.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 10.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.22.19 10.20	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.22.19 10.20	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-004	Date Collected:	08.13.19 12.45	Sample Depth:	0 - 3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**271**	5.05	mg/kg	08.16.19 19.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 14.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 14.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 14.09	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 14.09	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 14.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 14.09	
o-Terphenyl	84-15-1	83	%	70-135	08.16.19 14.09	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-004	Date Collected:	08.13.19 12.45	Sample Depth:	0 - 3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.22.19 11.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.22.19 11.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.22.19 11.43	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.22.19 11.43	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-005	Date Collected:	08.13.19 13.01	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.0**	4.95	mg/kg	08.16.19 19.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 14.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 14.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 14.28	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 14.28	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 14.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	08.16.19 14.28	
o-Terphenyl	84-15-1	76	%	70-135	08.16.19 14.28	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-005	Date Collected:	08.13.19 13.01	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.22.19 12.04	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.22.19 12.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.22.19 12.04	
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.22.19 12.04	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-006	Date Collected:	08.13.19 13.13	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**26.6**	4.95	mg/kg	08.16.19 19.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 14.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 14.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 14.48	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 14.48	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 14.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 14.48	
o-Terphenyl	84-15-1	81	%	70-135	08.16.19 14.48	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS02**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-006	Date Collected:	08.13.19 13.13	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.22.19 12.25	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.22.19 12.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	08.22.19 12.25	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.22.19 12.25	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-007	Date Collected:	08.13.19 13.23	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 11.30	Basis:	Wet Weight
Seq Number:	3098835			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**462**	5.04	mg/kg	08.16.19 19.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 15.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 15.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 15.07	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 15.07	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 15.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 15.07	
o-Terphenyl	84-15-1	83	%	70-135	08.16.19 15.07	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS03**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-007	Date Collected:	08.13.19 13.23	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.22.19 12.45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.22.19 12.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	08.22.19 12.45	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.22.19 12.45	

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-008	Date Collected:	08.13.19 13.27	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.44**	4.96	mg/kg	08.16.19 20.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 15.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 15.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 15.26	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 15.26	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 15.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 15.26	
o-Terphenyl	84-15-1	79	%	70-135	08.16.19 15.26	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS04**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-008	Date Collected:	08.13.19 13.27	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 01.05	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 01.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.22.19 01.05	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.22.19 01.05	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-009	Date Collected:	08.13.19 13.51	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.4**	5.00	mg/kg	08.16.19 20.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 15.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 15.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 15.45	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 15.45	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 15.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 15.45	
o-Terphenyl	84-15-1	80	%	70-135	08.16.19 15.45	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS05**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-009	Date Collected:	08.13.19 13.51	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 07.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 07.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.22.19 07.30	
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.22.19 07.30	

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Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-010	Date Collected:	08.13.19 14.01	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**273**	4.98	mg/kg	08.16.19 20.39		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 16.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 16.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 16.05	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 16.05	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 16.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 16.05	
o-Terphenyl	84-15-1	81	%	70-135	08.16.19 16.05	

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Sample Id:	**FS06**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-010	Date Collected:	08.13.19 14.01	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.22.19 01.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.22.19 01.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	08.22.19 01.48	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.22.19 01.48	

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-011	Date Collected:	08.13.19 14.28	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.6**	5.03	mg/kg	08.16.19 20.46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 16.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 16.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 16.43	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 16.43	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 16.43	
o-Terphenyl	84-15-1	80	%	70-135	08.16.19 16.43	

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Sample Id:	**FS07**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-011	Date Collected:	08.13.19 14.28	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 02.09	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.22.19 02.09	
4-Bromofluorobenzene	460-00-4	121	%	70-130	08.22.19 02.09	

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Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-012	Date Collected:	08.13.19 14.42	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**170**	4.99	mg/kg	08.16.19 20.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.17.19 16.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.17.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.17.19 16.01	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.17.19 16.01	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.17.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.17.19 16.01	
o-Terphenyl	84-15-1	82	%	70-135	08.17.19 16.01	

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Sample Id:	**FS08**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-012	Date Collected:	08.13.19 14.42	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.22.19 02.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 02.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	08.22.19 02.29	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.22.19 02.29	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-013	Date Collected:	08.13.19 14.44	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**168**	4.97	mg/kg	08.16.19 21.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 17.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 17.22	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 17.22	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 17.22	
o-Terphenyl	84-15-1	81	%	70-135	08.16.19 17.22	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS09**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-013	Date Collected:	08.13.19 14.44	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 15.00	Basis:	Wet Weight
Seq Number:	3099491			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.22.19 02.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.22.19 02.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	125	%	70-130	08.22.19 02.51	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.22.19 02.51	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-014	Date Collected:	08.13.19 15.09	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**122**	5.01	mg/kg	08.16.19 21.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 17.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 17.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 17.41	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 17.41	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 17.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 17.41	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 17.41	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS10**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-014	Date Collected:	08.13.19 15.09	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.17.19 00.13	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.17.19 00.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.17.19 00.13	
1,4-Difluorobenzene	540-36-3	83	%	70-130	08.17.19 00.13	

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-015	Date Collected:	08.13.19 15.11	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**115**	5.05	mg/kg	08.16.19 21.23		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 18.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 18.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 18.01	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 18.01	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 18.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.16.19 18.01	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 18.01	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS11**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-015	Date Collected:	08.13.19 15.11	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.17.19 00.33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 00.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.17.19 00.33	
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.17.19 00.33	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-016	Date Collected:	08.13.19 15.15	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**110**	4.98	mg/kg	08.16.19 21.30		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 18.20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 18.20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 18.20	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 18.20	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.16.19 18.20	
o-Terphenyl	84-15-1	85	%	70-135	08.16.19 18.20	

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LT Environmental, Inc., Arvada, CO

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Sample Id:	**FS12**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-016	Date Collected:	08.13.19 15.15	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.17.19 00.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 00.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.17.19 00.53	
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.17.19 00.53	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-017	Date Collected:	08.13.19 15.24	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.1**	5.02	mg/kg	08.16.19 21.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 18.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 18.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 18.39	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 18.39	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 18.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 18.39	
o-Terphenyl	84-15-1	84	%	70-135	08.16.19 18.39	

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Sample Id:	**FS13**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-017	Date Collected:	08.13.19 15.24	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.17.19 01.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 01.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	08.17.19 01.14	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.17.19 01.14	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-018	Date Collected:	08.13.19 15.26	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.3**	5.00	mg/kg	08.16.19 21.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 18.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 18.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 18.59	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 18.59	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 18.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 18.59	
o-Terphenyl	84-15-1	79	%	70-135	08.16.19 18.59	

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Sample Id:	**FS14**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-018	Date Collected:	08.13.19 15.26	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.17.19 01.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 01.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.17.19 01.34	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.17.19 01.34	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-019	Date Collected:	08.13.19 15.29	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.38**	5.03	mg/kg	08.16.19 22.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 19.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 19.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 19.18	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 19.18	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 19.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	08.16.19 19.18	
o-Terphenyl	84-15-1	77	%	70-135	08.16.19 19.18	

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Sample Id:	**FS15**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-019	Date Collected:	08.13.19 15.29	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.17.19 01.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.17.19 01.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.17.19 01.54	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.17.19 01.54	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS16**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-020	Date Collected:	08.13.19 15.43	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9.30**	4.96	mg/kg	08.16.19 22.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098907			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 19.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 19.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 19.37	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 19.37	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 19.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.16.19 19.37	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 19.37	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS16**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-020	Date Collected:	08.13.19 15.43	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.17.19 02.14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.17.19 02.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	120	%	70-130	08.17.19 02.14	
1,4-Difluorobenzene	540-36-3	88	%	70-130	08.17.19 02.14	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS17**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-021	Date Collected:	08.13.19 15.46	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.8**	4.99	mg/kg	08.16.19 22.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098908			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 22.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 22.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 22.12	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 22.12	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 22.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	08.16.19 22.12	
o-Terphenyl	84-15-1	80	%	70-135	08.16.19 22.12	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS17**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-021	Date Collected:	08.13.19 15.46	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.17.19 02.34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.17.19 02.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.17.19 02.34	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.17.19 02.34	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-022	Date Collected:	08.13.19 15.50	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.92**	4.97	mg/kg	08.16.19 22.33		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098908			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 22.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 22.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 22.31	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 22.31	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 22.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 22.31	
o-Terphenyl	84-15-1	78	%	70-135	08.16.19 22.31	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS18**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-022	Date Collected:	08.13.19 15.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.17.19 02.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.17.19 02.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	84	%	70-130	08.17.19 02.54	
4-Bromofluorobenzene	460-00-4	124	%	70-130	08.17.19 02.54	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-023	Date Collected:	08.13.19 16.07	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.16.19 22.39	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098908			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 22.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 22.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 22.50	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 22.50	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 22.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 22.50	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 22.50	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS19**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-023	Date Collected:	08.13.19 16.07	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.17.19 03.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 03.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.17.19 03.14	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.17.19 03.14	

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LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-024	Date Collected:	08.13.19 16.10	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.16.19 22.46	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098908			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<24.9	24.9	mg/kg	08.16.19 23.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<24.9	24.9	mg/kg	08.16.19 23.10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<24.9	24.9	mg/kg	08.16.19 23.10	U	1
Total TPH	PHC635	<24.9	24.9	mg/kg	08.16.19 23.10	U	1
Total GRO-DRO	PHC628	<24.9	24.9	mg/kg	08.16.19 23.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.16.19 23.10	
o-Terphenyl	84-15-1	82	%	70-135	08.16.19 23.10	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS20**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-024	Date Collected:	08.13.19 16.10	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.17.19 04.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.17.19 04.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.17.19 04.33	
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.17.19 04.33	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS21**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-025	Date Collected:	08.13.19 16.15	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.16.19 13.00	Basis:	Wet Weight
Seq Number:	3098839			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.79**	4.95	mg/kg	08.16.19 22.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.16.19 09.00	Basis:	Wet Weight
Seq Number:	3098908			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<25.0	25.0	mg/kg	08.16.19 23.29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<25.0	25.0	mg/kg	08.16.19 23.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<25.0	25.0	mg/kg	08.16.19 23.29	U	1
Total TPH	PHC635	<25.0	25.0	mg/kg	08.16.19 23.29	U	1
Total GRO-DRO	PHC628	<25.0	25.0	mg/kg	08.16.19 23.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	08.16.19 23.29	
o-Terphenyl	84-15-1	81	%	70-135	08.16.19 23.29	

Certificate of Analytical Results 634142

LT Environmental, Inc., Arvada, CO

Remuda N30 State 111H

Sample Id:	**FS21**	Matrix:	Soil	Date Received:	08.15.19 08.45
Lab Sample Id:	634142-025	Date Collected:	08.13.19 16.15	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	AMB	Date Prep:	08.16.19 14.00	Basis:	Wet Weight
Seq Number:	3099030			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.17.19 04.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.17.19 04.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.17.19 04.53	
4-Bromofluorobenzene	460-00-4	113	%	70-130	08.17.19 04.53	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 634142

LT Environmental, Inc.

Remuda N30 State 111H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098835 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684384-1-BLK LCS Sample Id: 7684384-1-BKS LCSD Sample Id: 7684384-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	252	101	90-110	0	20	mg/kg	08.16.19 16:33	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098839 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684396-1-BLK LCS Sample Id: 7684396-1-BKS LCSD Sample Id: 7684396-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	255	102	254	102	90-110	0	20	mg/kg	08.16.19 20:01	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098835 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634212-002 MS Sample Id: 634212-002 S MSD Sample Id: 634212-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	123	253	372	98	372	98	90-110	0	20	mg/kg	08.16.19 18:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098835 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634271-001 MS Sample Id: 634271-001 S MSD Sample Id: 634271-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	87.3	251	338	100	338	100	90-110	0	20	mg/kg	08.16.19 16:52	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098839 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634142-008 MS Sample Id: 634142-008 S MSD Sample Id: 634142-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.44	248	268	106	268	106	90-110	0	20	mg/kg	08.16.19 20:20	

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

QC Summary 634142

LT Environmental, Inc.

Remuda N30 State 111H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3098839 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634142-018 MS Sample Id: 634142-018 S MSD Sample Id: 634142-018 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	12.3	250	270	103	269	103	90-110	0	20	mg/kg	08.16.19 21:49	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098907 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684344-1-BLK LCS Sample Id: 7684344-1-BKS LCSD Sample Id: 7684344-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	927	93	891	89	70-135	4	20	mg/kg	08.16.19 11:54	
Diesel Range Organics (DRO)	<25.0	1000	893	89	868	87	70-135	3	20	mg/kg	08.16.19 11:54	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		99		98		70-135	%	08.16.19 11:54
o-Terphenyl	84		89		86		70-135	%	08.16.19 11:54

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098908 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684345-1-BLK LCS Sample Id: 7684345-1-BKS LCSD Sample Id: 7684345-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	983	98	1010	101	70-135	3	20	mg/kg	08.16.19 20:35	
Diesel Range Organics (DRO)	<25.0	1000	932	93	954	95	70-135	2	20	mg/kg	08.16.19 20:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		106		110		70-135	%	08.16.19 20:35
o-Terphenyl	89		94		98		70-135	%	08.16.19 20:35

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098907 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634142-001 MS Sample Id: 634142-001 S MSD Sample Id: 634142-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	982	98	982	99	70-135	0	20	mg/kg	08.16.19 12:52	
Diesel Range Organics (DRO)	<24.9	997	993	100	990	99	70-135	0	20	mg/kg	08.16.19 12:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		116		70-135	%	08.16.19 12:52
o-Terphenyl	92		93		70-135	%	08.16.19 12:52

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

QC Summary 634142

LT Environmental, Inc.

Remuda N30 State 111H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3098908 Matrix: Soil Date Prep: 08.16.19
Parent Sample Id: 634135-001 MS Sample Id: 634135-001 S MSD Sample Id: 634135-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	987	99	983	99	70-135	0	20	mg/kg	08.16.19 21:33	
Diesel Range Organics (DRO)	29.7	997	941	91	938	91	70-135	0	20	mg/kg	08.16.19 21:33	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		112		70-135	%	08.16.19 21:33
o-Terphenyl	92		88		70-135	%	08.16.19 21:33

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099030 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684430-1-BLK LCS Sample Id: 7684430-1-BKS LCSD Sample Id: 7684430-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0988	99	0.107	107	70-130	8	35	mg/kg	08.16.19 22:13	
Toluene	<0.000456	0.100	0.0948	95	0.102	102	70-130	7	35	mg/kg	08.16.19 22:13	
Ethylbenzene	<0.000565	0.100	0.0975	98	0.104	104	70-130	6	35	mg/kg	08.16.19 22:13	
m,p-Xylenes	<0.00101	0.200	0.195	98	0.208	104	70-130	6	35	mg/kg	08.16.19 22:13	
o-Xylene	<0.000344	0.100	0.101	101	0.108	108	70-130	7	35	mg/kg	08.16.19 22:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		100		103		70-130	%	08.16.19 22:13
4-Bromofluorobenzene	107		106		105		70-130	%	08.16.19 22:13

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3099491 Matrix: Solid Date Prep: 08.16.19
MB Sample Id: 7684426-1-BLK LCS Sample Id: 7684426-1-BKS LCSD Sample Id: 7684426-1-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	0.0873	87	0.0994	99	70-130	13	35	mg/kg	08.24.19 10:40	
Toluene	<0.00200	0.100	0.0839	84	0.0972	97	70-130	15	35	mg/kg	08.24.19 10:40	
Ethylbenzene	<0.00200	0.100	0.0972	97	0.111	111	70-130	13	35	mg/kg	08.24.19 10:40	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.225	113	70-130	14	35	mg/kg	08.24.19 10:40	
o-Xylene	<0.00200	0.100	0.0938	94	0.108	108	70-130	14	35	mg/kg	08.24.19 10:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		93		93		70-130	%	08.22.19 05:18
4-Bromofluorobenzene	109		82		116		70-130	%	08.22.19 05:18

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

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

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

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

QC Summary 634142

LT Environmental, Inc.

Remuda N30 State 111H

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

Seq Number: 3099030 Matrix: Soil Date Prep: 08.16.19

Parent Sample Id: 634142-014 MS Sample Id: 634142-014 S MSD Sample Id: 634142-014 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	0.0664	67	0.0844	85	70-130	24	35	mg/kg	08.16.19 22:54	X
Toluene	<0.00199	0.0996	0.0622	62	0.0800	80	70-130	25	35	mg/kg	08.16.19 22:54	X
Ethylbenzene	<0.00199	0.0996	0.0608	61	0.0810	81	70-130	28	35	mg/kg	08.16.19 22:54	X
m,p-Xylenes	<0.00398	0.199	0.121	61	0.162	81	70-130	29	35	mg/kg	08.16.19 22:54	X
o-Xylene	<0.00199	0.0996	0.0632	63	0.0845	85	70-130	29	35	mg/kg	08.16.19 22:54	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		105		70-130	%	08.16.19 22:54
4-Bromofluorobenzene	109		111		70-130	%	08.16.19 22:54

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

Seq Number: 3099491 Matrix: Soil Date Prep: 08.16.19

Parent Sample Id: 633883-001 MS Sample Id: 633883-001 S MSD Sample Id: 633883-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0163	16	0.0130	13	70-130	23	35	mg/kg	08.22.19 05:59	X
Toluene	<0.00200	0.0998	0.00794	8	0.00701	7	70-130	12	35	mg/kg	08.22.19 05:59	X
Ethylbenzene	<0.00200	0.0998	0.00611	6	0.00545	5	70-130	11	35	mg/kg	08.22.19 05:59	X
m,p-Xylenes	<0.00399	0.200	0.00989	5	0.0102	5	70-130	3	35	mg/kg	08.22.19 05:59	X
o-Xylene	<0.00200	0.0998	0.00574	6	0.00412	4	70-130	33	35	mg/kg	08.22.19 05:59	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		101		70-130	%	08.22.19 05:59
4-Bromofluorobenzene	120		123		70-130	%	08.22.19 05:59

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

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

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

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

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 634142

www.xenco.com Page 1 of 3

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

Work Order Comments

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

Project Name:	RemudaN30State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temperature (°C):	1.6	Temp Blank: (Yes) No	Wet Ice: (Yes) No	
Received Intact:	(Yes) No	Thermometer ID	TNM007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:	25	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SW01	S	08/12/19	1510	0-3'	1	X	X	X
SW02		08/12/19	1512					
SW03		08/12/19	1540					
SW04		08/13/19	1245					
FS01			1301	3'				
FS02			1313					
FS03			1323					
FS04			1327					
FS05			1351					
FS06			1401					

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8/15/19 08:45	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Final 1.000

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Chain of Custody

XENCO LABORATORIES

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

Work Order No: 634142

www.xenco.com Page 2 of 3

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

Work Order Comments

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

Project Name:	Remuda N 30 State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

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

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS07	S	08/13/19	1428	3'	1	X	X	X
FS08			1442					
FS09			1444					
FS10			1509					
FS11			1511					
FS12			1515					
FS13			1524					
FS14			1526					
FS15			1529					
FS16	↓	↓	1543	↓	↓	↓	↓	↓

Work Order Notes

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

Sample Comments

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		8/15/19 08:45	2		
3			4		
5			6		

Chain of Custody

XENCO LABORATORIES

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

Work Order No: 603142

www.xenco.com Page 3 of 3

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

Work Order Comments

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

Project Name:	RemudaN 30 State 111H	Turn Around	
Project Number:	012919033	Routine	☑
P.O. Number:	2RP-5273	Rush:	
Sampler's Name:	Fatima Smith	Due Date:	

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

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS17	S	08/13/19	1546	3'	1	X	X	X
FS18			1550					
FS19			1607					
FS20			1610					
FS21			1615					

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Fatima Smith		8/15/19 08:45	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **46332**

Date/Time: 08/15/19 11:40
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775997979470

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634142-001	S	SW01	08/12/19 15:10	E300_CL	Chloride by EPA 300	08/21/19	02/08/20	JKR	CL	
634142-001	S	SW01	08/12/19 15:10	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/26/19	JKR	GRO-DRO PHCC10C28 PI	
634142-001	S	SW01	08/12/19 15:10	SW8021B	BTEX by EPA 8021B	08/21/19	08/26/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-002	S	SW02	08/12/19 15:12	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/26/19	JKR	GRO-DRO PHCC10C28 PI	
634142-002	S	SW02	08/12/19 15:12	SW8021B	BTEX by EPA 8021B	08/21/19	08/26/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-002	S	SW02	08/12/19 15:12	E300_CL	Chloride by EPA 300	08/21/19	02/08/20	JKR	CL	
634142-003	S	SW03	08/12/19 15:40	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/26/19	JKR	GRO-DRO PHCC10C28 PI	
634142-003	S	SW03	08/12/19 15:40	SW8021B	BTEX by EPA 8021B	08/21/19	08/26/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-003	S	SW03	08/12/19 15:40	E300_CL	Chloride by EPA 300	08/21/19	02/08/20	JKR	CL	
634142-004	S	SW04	08/13/19 12:45	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-004	S	SW04	08/13/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-004	S	SW04	08/13/19 12:45	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-005	S	FS01	08/13/19 13:01	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-005	S	FS01	08/13/19 13:01	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-005	S	FS01	08/13/19 13:01	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-006	S	FS02	08/13/19 13:13	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-006	S	FS02	08/13/19 13:13	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-006	S	FS02	08/13/19 13:13	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-007	S	FS03	08/13/19 13:23	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-007	S	FS03	08/13/19 13:23	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-007	S	FS03	08/13/19 13:23	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-008	S	FS04	08/13/19 13:27	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-008	S	FS04	08/13/19 13:27	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-008	S	FS04	08/13/19 13:27	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-009	S	FS05	08/13/19 13:51	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter-Office Shipment

IOS Number **46332**

Date/Time: 08/15/19 11:40
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775997979470

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634142-009	S	FS05	08/13/19 13:51	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-009	S	FS05	08/13/19 13:51	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-010	S	FS06	08/13/19 14:01	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-010	S	FS06	08/13/19 14:01	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-010	S	FS06	08/13/19 14:01	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-011	S	FS07	08/13/19 14:28	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-011	S	FS07	08/13/19 14:28	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-011	S	FS07	08/13/19 14:28	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-012	S	FS08	08/13/19 14:42	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-012	S	FS08	08/13/19 14:42	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-012	S	FS08	08/13/19 14:42	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-013	S	FS09	08/13/19 14:44	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-013	S	FS09	08/13/19 14:44	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-013	S	FS09	08/13/19 14:44	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-014	S	FS10	08/13/19 15:09	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-014	S	FS10	08/13/19 15:09	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-014	S	FS10	08/13/19 15:09	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-015	S	FS11	08/13/19 15:11	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-015	S	FS11	08/13/19 15:11	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-015	S	FS11	08/13/19 15:11	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-016	S	FS12	08/13/19 15:15	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-016	S	FS12	08/13/19 15:15	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-016	S	FS12	08/13/19 15:15	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-017	S	FS13	08/13/19 15:24	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-017	S	FS13	08/13/19 15:24	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **46332**

Date/Time: 08/15/19 11:40
Created by: Elizabeth Mcclellan
Please send report to: Jessica Kramer

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

Lab# To: **Midland**
Air Bill No.: 775997979470
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
634142-017	S	FS13	08/13/19 15:24	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-018	S	FS14	08/13/19 15:26	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-018	S	FS14	08/13/19 15:26	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-018	S	FS14	08/13/19 15:26	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-019	S	FS15	08/13/19 15:29	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-019	S	FS15	08/13/19 15:29	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-019	S	FS15	08/13/19 15:29	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-020	S	FS16	08/13/19 15:43	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-020	S	FS16	08/13/19 15:43	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-020	S	FS16	08/13/19 15:43	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-021	S	FS17	08/13/19 15:46	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-021	S	FS17	08/13/19 15:46	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-021	S	FS17	08/13/19 15:46	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-022	S	FS18	08/13/19 15:50	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-022	S	FS18	08/13/19 15:50	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-022	S	FS18	08/13/19 15:50	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-023	S	FS19	08/13/19 16:07	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-023	S	FS19	08/13/19 16:07	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-023	S	FS19	08/13/19 16:07	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-024	S	FS20	08/13/19 16:10	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	
634142-024	S	FS20	08/13/19 16:10	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-024	S	FS20	08/13/19 16:10	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-025	S	FS21	08/13/19 16:15	SW8015MOD_NM	TPH by SW8015 Mod	08/21/19	08/27/19	JKR	GRO-DRO PHCC10C28 PI	
634142-025	S	FS21	08/13/19 16:15	E300_CL	Chloride by EPA 300	08/21/19	02/09/20	JKR	CL	
634142-025	S	FS21	08/13/19 16:15	SW8021B	BTEX by EPA 8021B	08/21/19	08/27/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Inter-Office Shipment

IOS Number **46332**

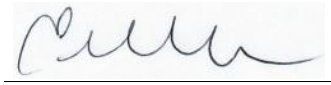
Date/Time: 08/15/19 11:40
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 775997979470

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

Inter Office Shipment or Sample Comments:

Date Relinquished:



Elizabeth McClellan

08/15/2019

Date Received:

Brianna Teel

08/16/2019 11:27

Cooler Temperature: 0.4

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46332

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

Sent By: Elizabeth McClellan **Date Sent:** 08/15/2019 11:40 AM

Received By: Brianna Teel **Date Received:** 08/16/2019 11:27 AM

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 08/16/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/15/2019 08:45:00 AM

Work Order #: 634142

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/15/2019

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