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	NRM2004956954
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.154055 Longitude -103.858082
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Rustler Bluff SWD	Site Type SWD Facility
Date Release Discovered 02/03/2020	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
M	02	25S	30E	Eddy

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

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 231.98	Volume Recovered (bbls) 231.66
☒ Produced Water	Volume Released (bbls) 470.97	Volume Recovered (bbls) 470.34
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Two wells were opened to increase production. Simultaneously, main heater treater lost pressure causing fluid to dump into water tanks resulting in sending all fluid to the Rustler Bluff SWD. This caused overflowing in the SWD site tanks. Total fluid recovered was 702 barrels. A third contractor has been retained to complete remediation activities.

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004956954
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of fluids over 25 barrels

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Yes by Amy Ruth to 'Griswold, Jim, EMNRD'; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; 'Hamlet, Robert, EMNRD' <Robert.Hamlet@state.nm.us>; Venegas, Victoria, EMNRD Victoria.Venegas@state.nm.us rmann@slo.state.nm.us' on Tuesday, February 4, 2020 at 10:02 AM via email.

Initial Response

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

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

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

N/A

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

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: Date: 2/18/2020

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Ramona Marcus Date: 2/18/2020

Location:	Rustler Bluff SWD	
Spill Date:	2/3/2020	

Area 1		
Approximate Area =	63.94	sq. ft.
Average Saturation (or depth) of spill =	2.00	inches
Average Porosity Factor =	0.20	
VOLUME OF LEAK		
Total Crude Oil =	0.13	bbls
Total Produced Water =	0.25	bbls

Area 2		
Approximate Area =	1589.00	sq. ft.
Average Saturation (or depth) of spill =	0.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.12	bbls
Total Produced Water =	0.24	bbls

Area 3		
Approximate Area =	1895.00	sq. ft.
Average Saturation (or depth) of spill =	0.25	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.07	bbls
Total Produced Water =	0.14	bbls

Area 4		
Approximate Area =	3941.44	cubic ft.
VOLUME OF LEAK		
Total Crude Oil =	**231.66**	bbls
Total Produced Water =	**470.34**	bbls

TOTAL VOLUME OF LEAK		
Total Crude Oil =	**231.98**	**bbls**
Total Produced Water =	**470.97**	**bbls**
TOTAL VOLUME RECOVERED		
Total Crude Oil =	**231.66**	**bbls**
Total Produced Water =	**470.34**	**bbls**

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	NRM2004956954
District RP	
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?	(>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

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004956954
District RP	
Facility ID	
Application ID	

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

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

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Coordinator_____

Signature:_____ _____ Date: 08/31/2020

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

OCD Only

Received by: Cristina Eads Date: 09/02/2020

State of New Mexico
Oil Conservation Division

Incident ID	NRM2004956954
District RP	
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: 08/31/2020

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

OCD Only

Received by: Cristina Eads Date: 09/02/2020

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

Closure Approved by: D E N I E D Date: 11/09/2020

Printed Name: Cristina Eads Title: Environmental Specialist

A proud member of WSP

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 222
Midland, Texas 79705
432.704.5178

August 31, 2020

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

RE: Closure Request
Rustler Bluff SWD
Incident Number NRM2004956954
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, soil removal, and soil sampling activities at the Rustler Bluff Salt Water Disposal (SWD) (Site) located in Unit M, Section 2, Township 25 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to address impacts to soil following a release of crude oil and produced water at the Site. Based on the results of the soil sampling events, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2004956954.

RELEASE BACKGROUND

On February 3, 2020 two wells were opened to increase production. Simultaneously, a main heater treater lost pressure causing fluid to dump into water tanks resulting in all fluids being sent to the Site. This caused the tanks to overflow into containment and onto the pad. South of the containment, a small portion of the release flowed into the adjacent pipeline right-of-way (ROW). Approximately 231.98 barrels (bbls) of crude oil and 470.97 bbls of produced water were released of which 231.66 bbls of crude oil and 470.34 bbls of produced water were recovered by vacuum truck. XTO immediately reported the release via email to the New Mexico Oil Conservation Division (NMOCD) on February 4, 2020. XTO then submitted a Release Notification and Corrective Action Form C-141 (Form C-141) on February 18, 2020 and was subsequently assigned Incident Number NRM2004956954.

SITE CHARACTERIZATION

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

320856103502801, located approximately 5,346 feet Southeast of the Site. The groundwater well has a depth to groundwater of 390 feet bgs and a total depth of 482 feet bgs. Ground surface elevation at the water well location is 3,365 feet above mean sea level (amsl). USGS well 320956103503001 and New Mexico Office of the State Engineer (NMOSE) well C-03716 are located 5,346 feet and 5,816 feet northeast of the Site respectively, and also indicate depth to groundwater is greater than 390 feet bgs. Based on the wells near the Site, there is a regional trend suggesting depth to groundwater is greater than 100 feet bgs. All wells used in determining depth to groundwater are depicted on Figure 1 and referenced well records are in Attachment 1.

The closest continuously flowing water or significant watercourse to the Site is a Freshwater Emergent Wetland located approximately 2,950 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 not underlain by unstable geology (low potential karst designation area). The Site receptors are depicted on Figure 1.

CLOSURE CRITERIA

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

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

Additionally, the reclamation of any affected area off of the well pad must be comprised of non-waste containing earthen material exhibiting chloride concentrations below 600 mg/kg, which was applied per NMAC 19.15.29.13.D (1) to the top 4 feet.

SITE ASSESSMENT ACTIVITIES

On February 25, 2020, LTE personnel inspected the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. LTE personnel collected four preliminary soil samples (SS01 through SS04) from within the release extent at a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photo-ionization detector (PID) and Hach® chloride QuanTab® test strips, respectively.

Preliminary soil samples SS01 through SS03 were collected on the pad north of the tank battery containment and soil sample SS04 was collected south of the containment along the edge of the pad in the pipeline ROW that also appears to function as a lease road. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was conducted during assessment activities. A photographic log is included in Attachment 2.

The preliminary 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 Carlsbad, New Mexico, for analysis of BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-GRO, TPH-DRO, and TPH-oil range organics (ORO) following EPA Method 8015M/D, and chloride following EPA Method 300.0.

Based on the laboratory analytical results for preliminary soil sample SS02 and field screening results; TPH concentrations exceeded the Closure Criteria north of the tank battery and on pad. Additionally, chloride concentrations in soil sample SS04 in the pipeline ROW exceeded the reclamation standard of 600 mg/kg. As such, soil delineation and excavation activities appeared to be warranted. Additional assessment activities were scheduled to further confirm the presence or absence of impacted soil. Laboratory analytical results for the preliminary soil samples are presented on Figure 2 and summarized in Table 1. The complete laboratory analytical report is included as Attachment 3.

DELINEATION ACTIVITIES

On March 3, 2020, LTE personnel returned to the Site to oversee additional soil assessment activities. Delineation samples from potholes PH01 through PH03 were advanced with a track-mounted backhoe to depths ranging from approximately 1-foot to 5 feet bgs, within the release extent initially characterized by soil samples SS01, SS03, and SS04. Soil from the potholes was field screened for volatile aromatic hydrocarbons and chloride. Field screening results and observations for each pothole were documented on lithologic/soil sampling logs and are included as Attachment 4. The delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico. All potholes were backfilled with the soil removed. The delineation soil sample locations are depicted on Figure 3 and summarized in Table 1.

Laboratory analytical results indicated benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in delineation pothole samples PH01/PH01B through PH03/PH03B.

EXCAVATION ACTIVITIES

On March 5 and March 6, 2020, LTE personnel oversaw excavation of impacted soil in the vicinity of soil sample SS02, located on pad, via track-mounted backhoe. To direct excavation activities, LTE screened soil for volatile aromatic hydrocarbons and chloride. The excavation was approximately 5 feet in depth. 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 SW06 were collected from the sidewalls of the excavation from depths ranging from the ground surface to approximately 5 feet bgs. Composite soil samples FS01 through FS13 were collected from the floor of the excavation at a depth of approximately 5 feet bgs. The excavation soil samples were collected, handled and analyzed as described above, and submitted to Xenco in Carlsbad, New Mexico.

One April 22, 2020, LTE personnel returned to the Site to oversee additional excavation of impacted soil in the vicinity of soil sample PH03/PH03B, located along the edge of the pad in a pipeline ROW that also appears to function as a lease road, via track-mounted backhoe. LTE screened soil for volatile aromatic hydrocarbons and chloride. The excavation was approximately 4 feet in depth. 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 SW07 through SW09 collected from the sidewalls at depths ranging from ground surface to approximately 4 feet bgs. Composite soil sample FS14 was collected from the floor at a depth of approximately 4 feet bgs

The on-pad excavation extent was approximately 2,580 square feet and approximately 480 cubic yards of impacted soil were removed. The excavation extent in the pipeline ROW was approximately 200 square feet and an estimated 30 cubic yards of waste-containing soil were removed. The final excavation extents and composite soil sample locations are presented on Figure 4. The impacted soil was transported and properly disposed of at the R360 landfill facility located in Hobbs, New Mexico.

Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH and chloride concentrations in soil were in compliance with the Closure Criteria in confirmation floor samples FS01 through FS13 and sidewall samples SW01 through SW06, collected from the on-pad excavation. Additionally, excavation confirmation samples collected from the excavation in the adjacent pipeline ROW were compliant with the reclamation standard regarding waste containing soil in the top 4 feet. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 3.

BACKFILL ACTIVITIES

On March 12, 2020, following the review of laboratory analytical results to confirm all impacted soil had been removed from the Site, the excavation was backfilled with clean backfill material and graded to match the surrounding area. Photo documentation was conducted during backfill activities and a photographic log is included in Attachment 2.

CONCLUSIONS

A total of 231.66 bbls of crude oil and 470.34 bbls of produced water were recovered by vacuum truck and approximately 510 cubic yards of impacted soil were excavated from the Site during remediation activities. Laboratory analytical results indicated benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride concentrations were compliant with Closure Criteria in all confirmation soil samples collected from the final excavation extents. In addition, confirmation soil samples collected from the excavation in the pipeline ROW are compliant with the reclamation standard regarding removal of waste containing soil in the top 4 feet of the subsurface. Areas of the release footprint on pad that were not excavated were delineated with subsurface sampling to 5 feet bgs. All delineation samples were compliant with Closure Criteria. As such, XTO respectfully requests NFA for the release associated with Incident Number NRM2004956954. XTO backfilled the excavations with material purchased locally and recontoured the Site to match pre-existing site conditions.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Rahul Kaushik
Staff Engineer

Ashley L. Ager, P.G.
Senior Geologist

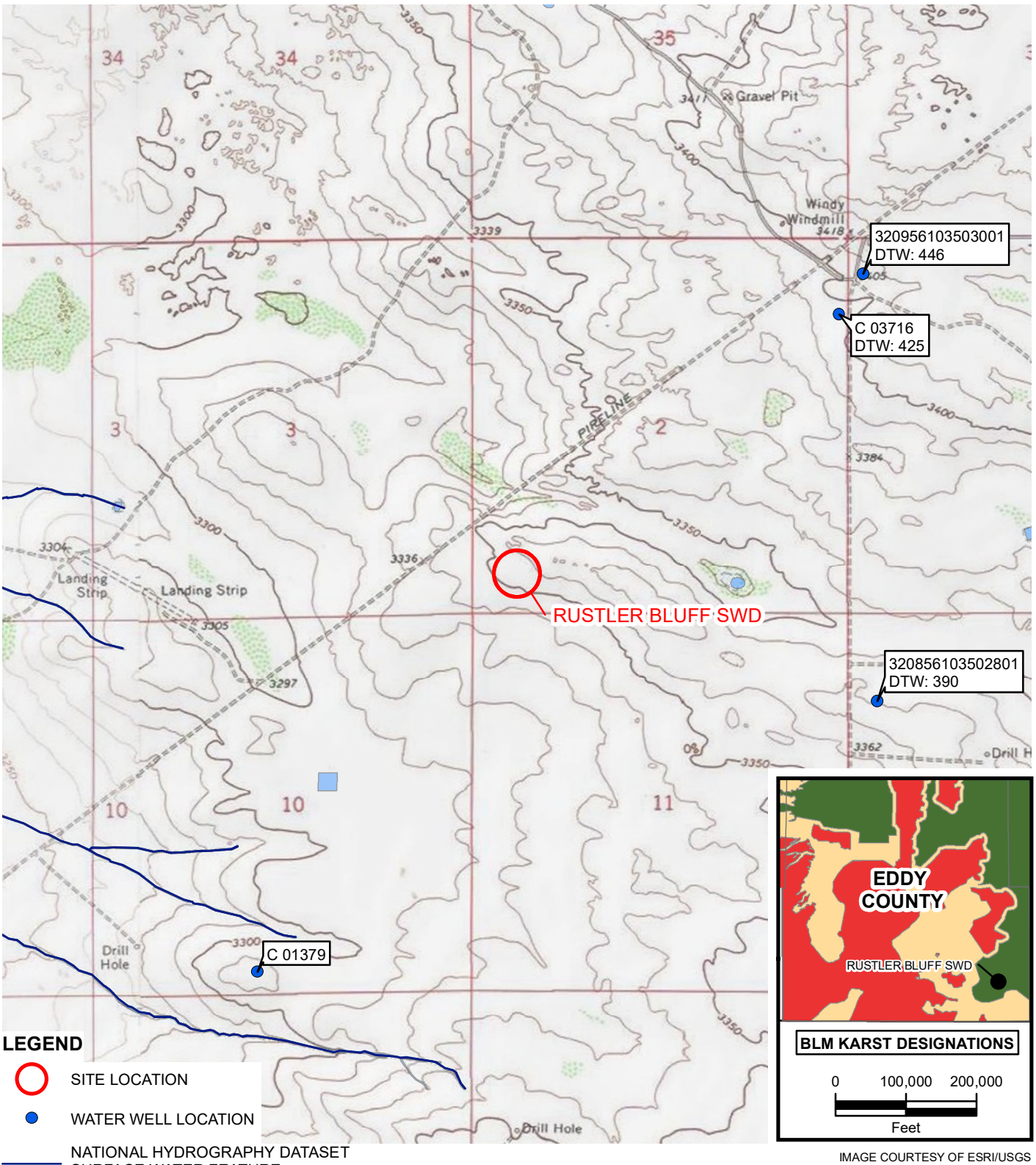
cc: Kyle Littrell, XTO
Ryan Mann, New Mexico State Land office (SLO)
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

A proud member of WSP

Appendices:

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	Referenced Well Logs
Attachment 2	Photographic Log
Attachment 3	Laboratory Analytical Reports
Attachment 4	Lithologic/Soil Sampling Log

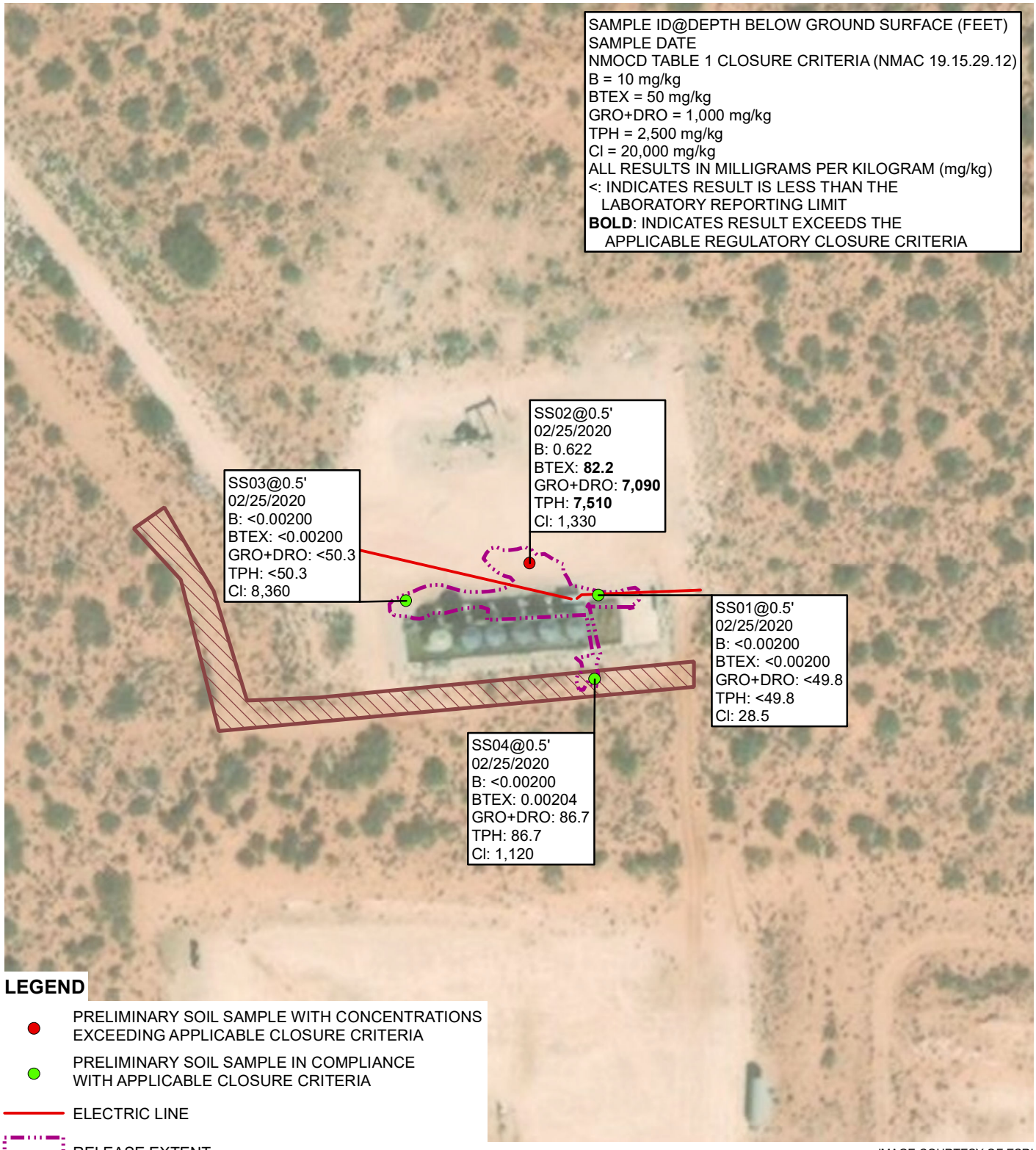
FIGURES



NOTE: INCIDENT NUMBER NRM2004956954
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
RUSTLER BLUFF SWD
UNIT M SEC 2 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

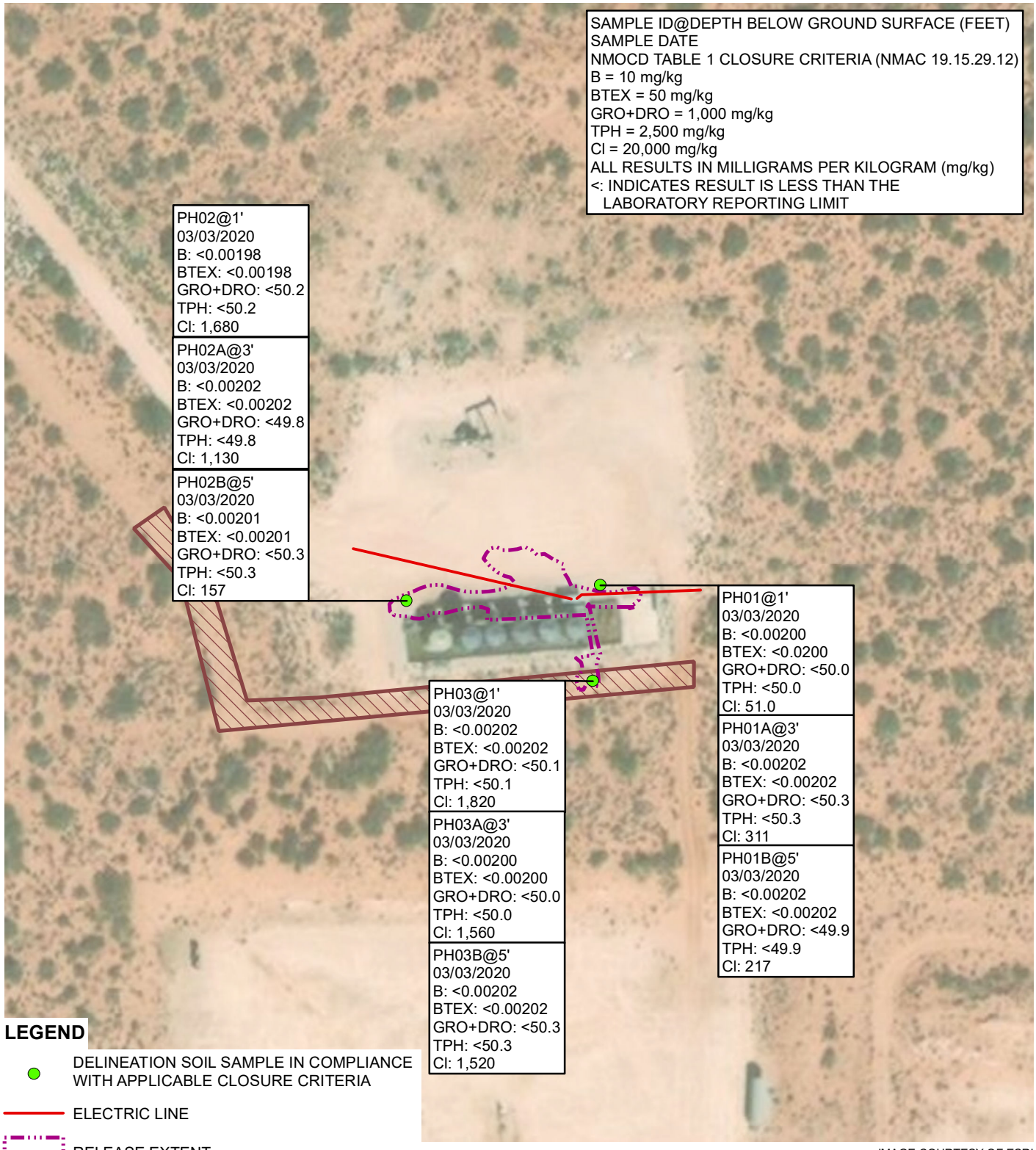
P:\XTO Energy\GIS\MXD\012920029_RUSTLER BLUFF\012920029_FIG01_SL_2020.mxd



B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBER NRM2004956954

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
RUSTLER BLUFF SWD
UNIT M SEC 2 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920029_RUSTLER BLUFF\012920029_FIG02_PRELIMINARY_2020.mxd



LEGEND

- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ELECTRIC LINE
- RELEASE EXTENT
- PIPELINE ROW/LEASE ROAD

IMAGE COURTESY OF ESRI

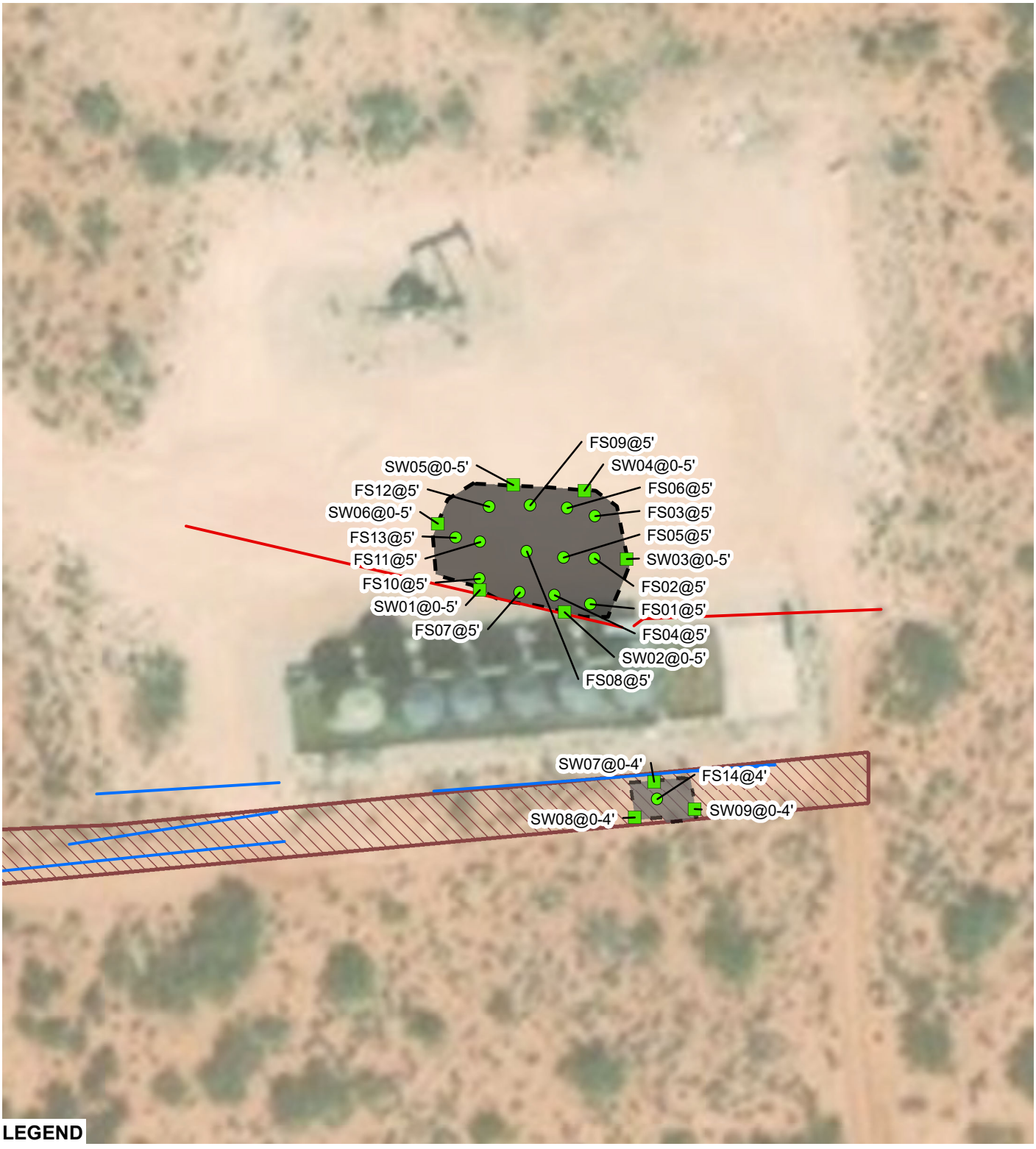
0 100 200
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
GRO: GASOLINE RANGE ORGANICS
DRO: DIESEL RANGE ORGANICS
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: INCIDENT NUMBER NRM2004956954

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
RUSTLER BLUFF SWD
UNIT M SEC 2 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920029_RUSTLER BLUFF\012920029_FIG03_DELINEATION_2020.mxd



LEGEND

- FLOOR SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- SIDEWALL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
- ELECTRIC LINE
- EXCAVATION EXTENT
- PIPELINE ROW/LEASE ROAD

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: INCIDENT NUMBER NRM2004956954

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
RUSTLER BLUFF SWD
UNIT M SEC 2 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920029_RUSTLER BLUFF\012920029_FIG04_EXCAVATION_ND_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

RUSTLER BLUFF SWD
INCIDENT NUMBER # NRM2004956954
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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
SS01	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	28.5
SS02	0.5	02/25/2020	0.622	19.2	8.76	53.6	82.2	2,090	5,000	420	7,090	7,510	1,330
SS03	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	8,360
SS04	0.5	02/25/2020	<0.00200	<0.00200	<0.00200	0.00204	0.00204	<49.8	86.7	<49.8	86.7	86.7	1,120
PH01	1	03/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	51.0
PH01A	3	03/03/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	311
PH01B	5	03/03/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	217
PH02	1	03/03/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.2	<50.2	<50.2	<50.2	<50.2	1,680
PH02A	3	03/03/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	1,130
PH02B	5	03/03/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	157
PH03	1	03/03/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	1,820
PH03A	3	03/03/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,560
PH03B	5	03/03/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	1,520
FS01	5	03/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	138
FS02	5	03/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	272
FS03	5	03/05/2020	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<49.9	<49.9	<49.9	<49.9	<49.9	117
FS04	5	03/05/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	258
FS05	5	03/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	230
FS06	5	03/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	15.0
FS07	5	03/05/2020	<0.00197	<0.00197	<0.00197	<0.00197	<0.00197	<49.8	<49.8	<49.8	<49.8	<49.8	269
FS08	5	03/05/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	290
FS09	5	03/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	294
FS10	5	03/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	195

A proud member of WSP

TABLE 1
SOIL ANALYTICAL RESULTS

RUSTLER BLUFF SWD
INCIDENT NUMBER # NRM2004956954
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)
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**20,000**
FS11	5	03/05/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	265
FS12	5	03/05/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	255
FS13	5	03/06/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	270
FS14	4	04/22/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,690
SW01	0 - 5	03/06/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.2	<50.2	<50.2	<50.2	<50.2	192
SW02	0 - 5	03/06/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	<10.1
SW03	0 - 5	03/06/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	56.2
SW04	0 - 5	03/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	117
SW05	0 - 5	03/06/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	74.4
SW06	0 - 5	03/06/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	108
SW07	0 - 4	04/22/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.1	<50.1	<50.1	<50.1	<50.1	204
SW08	0 - 4	04/22/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	237
SW09	0 - 4	04/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	18.4

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
MRO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
Gray - indicates soil that has been removed
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

A proud member of WSP

ATTACHMENT 1: REFERENCED WELL LOGS

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

USGS 320856103502801 25S.30E.12.113211

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°08'56", Longitude 103°50'28" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 482 feet
Land surface altitude: 3,371 feet above NAVD88.
Well completed in "Alluvium, Bolson Deposits and Other Surface Deposits" (110AVMB) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1959-03-25	1998-01-28	5
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

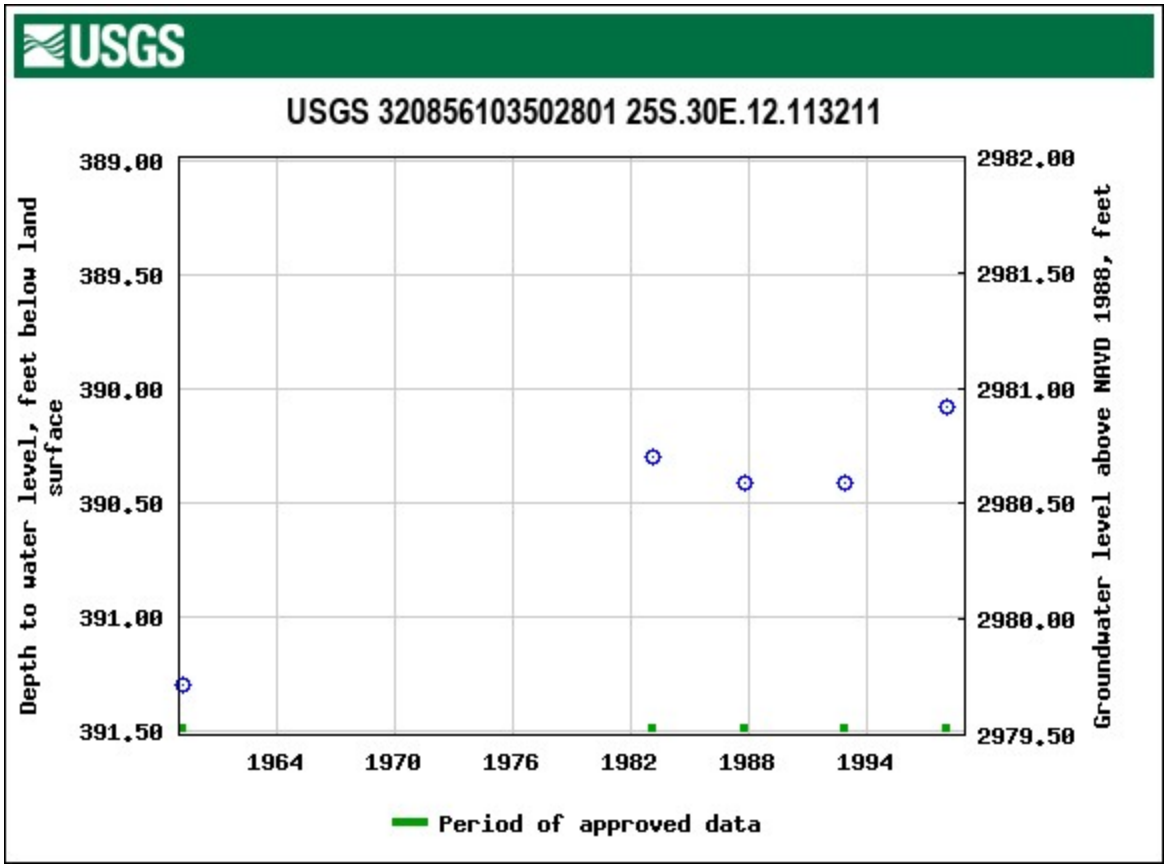
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320856103502801

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-31 17:41:34 EDT
0.28 0.27 caww01


USGS
USGS 320856103502801 25S.30E.12.113211
Depth to water level, feet below land surface
389.00
389.50
390.00
390.50
391.00
391.50
Groundwater level above NAVD 1988, feet
2982.00
2981.50
2981.00
2980.50
2980.00
2979.50
1964
1970
1976
1982
1988
1994
Period of approved data

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03716 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: BOPCO LP

Contact: DAVID CORGILL

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	539192	EXPL	2014-01-21	PMT	LOG	C 03716	T	0	0	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 03716 POD1		Shallow	4	2	2	02	25S	30E	609069	3559211	NEAR BUCK JACKSON & TWIN WELLS

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
	C 03716 POD1	4	2	2	02	25S	30E	609069	3559211

Driller License:	1229	**Driller Company:**	CARTER'S WELL DRILLING		
Driller Name:	RICHARD CARTER				
Drill Start Date:	02/05/2014	**Drill Finish Date:**	03/03/2014	**Plug Date:**	
Log File Date:	03/12/2014	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	50 GPM
Casing Size:		**Depth Well:**	600 feet	**Depth Water:**	425 feet

Water Bearing Stratifications:	Top	Bottom	Description
	442	600	Sandstone/Gravel/Conglomerate

National Water Information System: Web Interface

Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

USGS 320956103503001 24S.30E.36.33333

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°09'56", Longitude 103°50'30" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 480 feet
Land surface altitude: 3,408 feet above NAVD88.
Well completed in "Rustler Formation" (312RSLR) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1958-08-19	1987-10-15	4
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

Record for this site is maintained by the USGS New Mexico Water Science Center
Email questions about this site to New Mexico Water Science Center Water-Data Inquiries

---

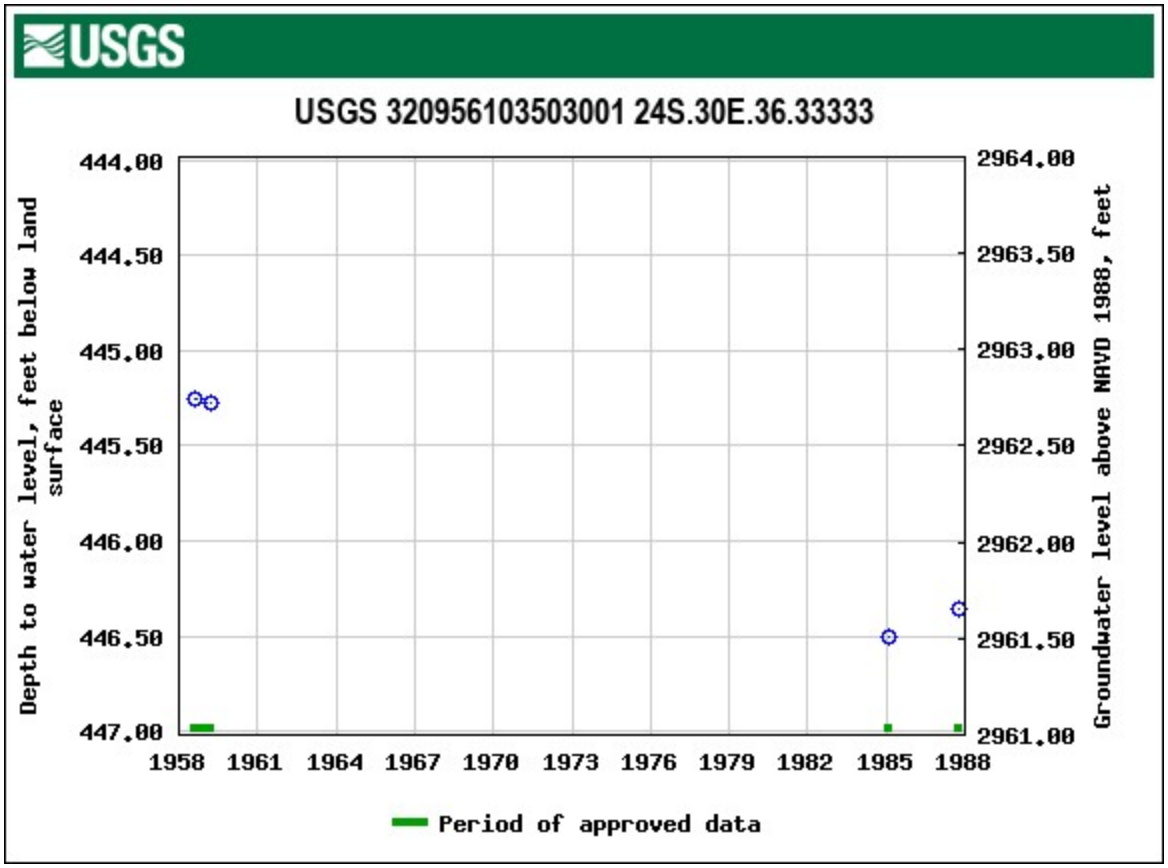
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320956103503001

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-31 17:43:11 EDT
0.27 0.25 caww01


USGS
USGS 320956103503001 24S.30E.36.33333
Depth to water level, feet below land surface
444.00
444.50
445.00
445.50
446.00
446.50
447.00
Groundwater level above NAVD 1988, feet
2964.00
2963.50
2963.00
2962.50
2962.00
2961.50
2961.00
1958
1961
1964
1967
1970
1973
1976
1979
1982
1985
1988
Period of approved data

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: Southern view of release extent.

Photograph 2: Southeastern view of release extent.

PHOTOGRAPHIC LOG

Photograph 3: Western view of the Site during excavation activities.

Photograph 4: Western view of the Site during final excavation activities.

PHOTOGRAPHIC LOG

Photograph 5: Eastern view of Site during excavation activities in pipeline ROW.

Photograph 6: Southern view of Site during final excavation actvities in pipeline ROW.

PHOTOGRAPHIC LOG

Photograph 7: Eastern view of Site during the backfilling activities.

Photograph 8: Northeastern view of Site after final backfilling operations.

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 653863

for

LT Environmental, Inc.

Project Manager: Dan Moir

Rustler Bluff SWD

012920029

02-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

02-MAR-20

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

Reference: XENCO Report No(s): **653863**
Rustler Bluff SWD
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) 653863. 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. 653863 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 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	02-25-20 09:50	0.5 ft	653863-001
SS02	S	02-25-20 09:55	0.5 ft	653863-002
SS03	S	02-25-20 10:00	0.5 ft	653863-003
SS04	S	02-25-20 10:10	0.5 ft	653863-004

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Rustler Bluff SWD

Project ID: *012920029*
Work Order Number(s): *653863*

Report Date: *02-MAR-20*
Date Received: *02/26/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118007 BTEX by EPA 8021B

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

Certificate of Analysis Summary 653863

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012920029
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Feb-26-20 04:52 pm
Report Date: 02-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	653863-001		653863-002		653863-003		653863-004					
	Field Id:	SS01		SS02		SS03		SS04					
	Depth:	0.5- ft		0.5- ft		0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Feb-25-20 09:50		Feb-25-20 09:55		Feb-25-20 10:00		Feb-25-20 10:10					
BTEX by EPA 8021B	***Extracted:***	Feb-27-20 14:10		Feb-27-20 14:10		Feb-27-20 14:10		Feb-27-20 14:10					
	Analyzed:	** ** ** **		Feb-27-20 23:12		Feb-27-20 14:27		Feb-27-20 14:48					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	0.622	0.400	<0.00200	0.00200	<0.00200	0.00200				
Toluene		<0.00200	0.00200	19.2	0.400	<0.00200	0.00200	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	8.76	0.400	<0.00200	0.00200	<0.00200	0.00200				
m,p-Xylenes		<0.00401	0.00401	39.2	0.800	<0.00399	0.00399	<0.00399	0.00399				
o-Xylene		<0.00200	0.00200	14.4	0.400	<0.00200	0.00200	0.00204	0.00200				
Total Xylenes		<0.00200	0.00200	53.6	0.400	<0.00200	0.00200	0.00204	0.00200				
Total BTEX		<0.00200	0.00200	82.2	0.400	<0.00200	0.00200	0.00204	0.00200				
Chloride by EPA 300	***Extracted:***	Feb-27-20 09:22		Feb-27-20 09:22		Feb-27-20 09:22		Feb-27-20 09:22					
	Analyzed:	Feb-27-20 10:14		Feb-27-20 10:32		Feb-27-20 10:38		Feb-27-20 10:43					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		28.5	9.98	1330	50.4	8360	50.3	1120	50.0				
TPH by SW8015 Mod	***Extracted:***	Feb-27-20 13:02		Feb-27-20 13:02		Feb-27-20 13:02		Feb-27-20 13:02					
	Analyzed:	Feb-27-20 14:47		Feb-27-20 15:07		Feb-27-20 15:27		Feb-27-20 15:27					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	2090	50.1	<50.3	50.3	<49.8	49.8				
Diesel Range Organics (DRO)		<49.8	49.8	5000	50.1	<50.3	50.3	86.7	49.8				
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	420	50.1	<50.3	50.3	<49.8	49.8				
Total GRO-DRO		<49.8	49.8	7090	50.1	<50.3	50.3	86.7	49.8				
Total TPH		<49.8	49.8	7510	50.1	<50.3	50.3	86.7	49.8				

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-001	Date Collected:	02.25.20 09.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 09.22	Basis:	Wet Weight
Seq Number:	3117872				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**28.5**	9.98	mg/kg	02.27.20 10.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	02.27.20 13.02	Basis:	Wet Weight
Seq Number:	3118012				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 14.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	02.27.20 14.47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 14.47	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	02.27.20 14.47	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	02.27.20 14.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	02.27.20 14.47	
o-Terphenyl	84-15-1	132	%	70-135	02.27.20 14.47	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-001	Date Collected:	02.25.20 09.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 14.10	Basis:	Wet Weight
Seq Number:	3118007				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.27.20 14.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 14.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	02.27.20 14.07	
1,4-Difluorobenzene	540-36-3	103	%	70-130	02.27.20 14.07	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-002	Date Collected:	02.25.20 09.55	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 09.22	Basis:	Wet Weight
Seq Number:	3117872				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1330**	50.4	mg/kg	02.27.20 10.32		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	02.27.20 13.02	Basis:	Wet Weight
Seq Number:	3118012				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**2090**	50.1	mg/kg	02.27.20 15.07		1
Diesel Range Organics (DRO)	C10C28DRO	**5000**	50.1	mg/kg	02.27.20 15.07		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**420**	50.1	mg/kg	02.27.20 15.07		1
Total GRO-DRO	PHC628	**7090**	50.1	mg/kg	02.27.20 15.07		1
Total TPH	PHC635	**7510**	50.1	mg/kg	02.27.20 15.07		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-135	02.27.20 15.07	
o-Terphenyl	84-15-1	122	%	70-135	02.27.20 15.07	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-002	Date Collected:	02.25.20 09.55	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 14.10	Basis:	Wet Weight
Seq Number:	3118007				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**0.622**	0.400	mg/kg	02.27.20 23.12		200
Toluene	108-88-3	**19.2**	0.400	mg/kg	02.27.20 23.12		200
Ethylbenzene	100-41-4	**8.76**	0.400	mg/kg	02.27.20 23.12		200
m,p-Xylenes	179601-23-1	**39.2**	0.800	mg/kg	02.27.20 23.12		200
o-Xylene	95-47-6	**14.4**	0.400	mg/kg	02.27.20 23.12		200
Total Xylenes	1330-20-7	**53.6**	0.400	mg/kg	02.27.20 23.12		200
Total BTEX		**82.2**	0.400	mg/kg	02.27.20 23.12		200

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	02.27.20 23.12	
1,4-Difluorobenzene	540-36-3	100	%	70-130	02.27.20 23.12	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id: **SS03** Matrix: Soil Date Received:02.26.20 16.52
Lab Sample Id: 653863-003 Date Collected: 02.25.20 10.00 Sample Depth: 0.5 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 02.27.20 09.22 Basis: Wet Weight
Seq Number: 3117872

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8360**	50.3	mg/kg	02.27.20 10.38		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
Tech: MAB % Moisture:
Analyst: CAC Date Prep: 02.27.20 13.02 Basis: Wet Weight
Seq Number: 3118012

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	02.27.20 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	02.27.20 15.27	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	02.27.20 15.27	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	02.27.20 15.27	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	02.27.20 15.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	02.27.20 15.27	
o-Terphenyl	84-15-1	113	%	70-135	02.27.20 15.27	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-003	Date Collected:	02.25.20 10.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 14.10	Basis:	Wet Weight
Seq Number:	3118007				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 14.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.27.20 14.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	02.27.20 14.27	
4-Bromofluorobenzene	460-00-4	125	%	70-130	02.27.20 14.27	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-004	Date Collected:	02.25.20 10.10	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 09.22	Basis:	Wet Weight
Seq Number:	3117872				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1120**	50.0	mg/kg	02.27.20 10.43		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	MAB			% Moisture:	
Analyst:	CAC	Date Prep:	02.27.20 13.02	Basis:	Wet Weight
Seq Number:	3118012				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	02.27.20 15.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	**86.7**	49.8	mg/kg	02.27.20 15.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	02.27.20 15.27	U	1
Total GRO-DRO	PHC628	**86.7**	49.8	mg/kg	02.27.20 15.27		1
Total TPH	PHC635	**86.7**	49.8	mg/kg	02.27.20 15.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.27.20 15.27	
o-Terphenyl	84-15-1	106	%	70-135	02.27.20 15.27	

Certificate of Analytical Results 653863

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	02.26.20 16.52
Lab Sample Id:	653863-004	Date Collected:	02.25.20 10.10	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	02.27.20 14.10	Basis:	Wet Weight
Seq Number:	3118007				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.27.20 14.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.27.20 14.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.27.20 14.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	02.27.20 14.48	U	1
o-Xylene	95-47-6	**0.00204**	0.00200	mg/kg	02.27.20 14.48		1
Total Xylenes	1330-20-7	**0.00204**	0.00200	mg/kg	02.27.20 14.48		1
Total BTEX		**0.00204**	0.00200	mg/kg	02.27.20 14.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	89	%	70-130	02.27.20 14.48	
1,4-Difluorobenzene	540-36-3	94	%	70-130	02.27.20 14.48	

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 653863

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117872 — Matrix: Solid — Date Prep: 02.27.20
MB Sample Id: 7697574-1-BLK — LCS Sample Id: 7697574-1-BKS — LCSD Sample Id: 7697574-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.56	250	259	104	261	104	90-110	1	20	mg/kg	02.27.20 08:22	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117872 — Matrix: Soil — Date Prep: 02.27.20
Parent Sample Id: 653845-008 — MS Sample Id: 653845-008 S — MSD Sample Id: 653845-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	316	200	525	105	524	104	90-110	0	20	mg/kg	02.27.20 08:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3117872 — Matrix: Soil — Date Prep: 02.27.20
Parent Sample Id: 653863-001 — MS Sample Id: 653863-001 S — MSD Sample Id: 653863-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.5	200	244	108	245	108	90-110	0	20	mg/kg	02.27.20 10:21	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118012 — Matrix: Solid — Date Prep: 02.27.20
MB Sample Id: 7697644-1-BLK — LCS Sample Id: 7697644-1-BKS — LCSD Sample Id: 7697644-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1070	107	1020	102	70-135	5	35	mg/kg	02.27.20 14:08	
Diesel Range Organics (DRO)	<50.0	1000	1280	128	1210	121	70-135	6	35	mg/kg	02.27.20 14:08	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		122		116		70-135	%	02.27.20 14:08
o-Terphenyl	112		112		124		70-135	%	02.27.20 14:08

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118012 — Matrix: Solid — Date Prep: 02.27.20
MB Sample Id: 7697644-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	02.27.20 13:48	

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 653863

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3118012 | Matrix: Soil | Date Prep: 02.27.20
Parent Sample Id: 653863-001 | MS Sample Id: 653863-001 S | MSD Sample Id: 653863-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	768	77	838	84	70-135	9	35	mg/kg	02.27.20 14:47	
Diesel Range Organics (DRO)	<50.0	999	934	93	1010	101	70-135	8	35	mg/kg	02.27.20 14:47	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		105		70-135	%	02.27.20 14:47
o-Terphenyl	104		114		70-135	%	02.27.20 14:47

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118007 | Matrix: Solid | Date Prep: 02.27.20
MB Sample Id: 7697638-1-BLK | LCS Sample Id: 7697638-1-BKS | LCSD Sample Id: 7697638-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.103	103	70-130	5	35	mg/kg	02.27.20 12:25	
Toluene	<0.00200	0.100	0.105	105	0.0995	100	70-130	5	35	mg/kg	02.27.20 12:25	
Ethylbenzene	<0.00200	0.100	0.101	101	0.0956	96	71-129	5	35	mg/kg	02.27.20 12:25	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.198	99	70-135	5	35	mg/kg	02.27.20 12:25	
o-Xylene	<0.00200	0.100	0.104	104	0.0984	98	71-133	6	35	mg/kg	02.27.20 12:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		103		70-130	%	02.27.20 12:25
4-Bromofluorobenzene	96		93		92		70-130	%	02.27.20 12:25

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118007 | Matrix: Soil | Date Prep: 02.27.20
Parent Sample Id: 653863-001 | MS Sample Id: 653863-001 S | MSD Sample Id: 653863-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.118	118	0.113	113	70-130	4	35	mg/kg	02.27.20 13:06	
Toluene	<0.00201	0.100	0.115	115	0.108	108	70-130	6	35	mg/kg	02.27.20 13:06	
Ethylbenzene	<0.00201	0.100	0.111	111	0.101	101	71-129	9	35	mg/kg	02.27.20 13:06	
m,p-Xylenes	<0.00402	0.201	0.230	114	0.207	104	70-135	11	35	mg/kg	02.27.20 13:06	
o-Xylene	<0.00201	0.100	0.114	114	0.102	102	71-133	11	35	mg/kg	02.27.20 13:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		103		70-130	%	02.27.20 13:06
4-Bromofluorobenzene	96		98		70-130	%	02.27.20 13:06

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

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: 653863

www.xenco.com Page 1 of 1

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

Work Order Comments

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

Project Name:	Rustler Bluff SWD	Turn Around	
Project Number:	012920029	Routine	☑
P.O. Number:		Rush:	
Sampler's Name:	Robert McAfee	Due Date:	

SAMPLE RECEIPT

Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.2	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	4

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	02/25/20	0950	0.5'	1	X	X	X
SS02			0955			X	X	X
SS03			1000			X	X	X
SS04			1010			X	X	X

Work Order Notes

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

Sample Comments

discrete

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

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Robert McAfee		2/26/20 16:52	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018 1

Analytical Report 654476

for

LT Environmental, Inc.

Project Manager: Dan Moir

Rustler Bluff SWD

012920029

05-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05-MAR-20

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

Reference: XENCO Report No(s): **654476**
Rustler Bluff SWD
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) 654476. 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. 654476 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	03-03-20 12:35	1 ft	654476-001
PH01A	S	03-03-20 12:42	3 ft	654476-002
PH01B	S	03-03-20 12:45	5 ft	654476-003
PH02	S	03-03-20 12:50	1 ft	654476-004
PH02A	S	03-03-20 12:53	3 ft	654476-005
PH02B	S	03-03-20 12:55	5 ft	654476-006
PH03	S	03-03-20 13:48	1 ft	654476-007
PH03A	S	03-03-20 13:50	3 ft	654476-008
PH03B	S	03-03-20 13:52	5 ft	654476-009

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Rustler Bluff SWD

Project ID: *012920029*
Work Order Number(s): *654476*

Report Date: *05-MAR-20*
Date Received: *03/04/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118584 BTEX by EPA 8021B

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

Certificate of Analysis Summary 654476

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012920029
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Mar-04-20 08:50 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	654476-001		654476-002		654476-003		654476-004		654476-005		654476-006	
	Field Id:	PH01		PH01A		PH01B		PH02		PH02A		PH02B	
	Depth:	1- ft		3- ft		5- ft		1- ft		3- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-03-20 12:35		Mar-03-20 12:42		Mar-03-20 12:45		Mar-03-20 12:50		Mar-03-20 12:53		Mar-03-20 12:55	
BTEX by EPA 8021B	***Extracted:***	Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00	
	Analyzed:	Mar-04-20 15:25		Mar-04-20 15:46		Mar-04-20 16:06		Mar-04-20 16:26		Mar-04-20 16:47		Mar-04-20 17:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00404	0.00404	<0.00403	0.00403	<0.00396	0.00396	<0.00404	0.00404	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00202	0.00202	<0.00202	0.00202	<0.00198	0.00198	<0.00202	0.00202	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Mar-04-20 12:00		Mar-04-20 12:00		Mar-04-20 12:00		Mar-04-20 12:00		Mar-04-20 12:00		Mar-04-20 12:00	
	Analyzed:	Mar-04-20 15:59		Mar-04-20 15:15		Mar-04-20 15:22		Mar-04-20 15:28		Mar-04-20 15:34		Mar-04-20 15:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		51.0	10.0	311	49.9	217	9.94	1680	50.4	1130	10.0	157	9.98
TPH by SW8015 Mod	***Extracted:***	Mar-04-20 13:00		Mar-04-20 13:00		Mar-04-20 13:00		Mar-04-20 13:00		Mar-04-20 13:00		Mar-04-20 13:00	
	Analyzed:	Mar-04-20 15:40		Mar-04-20 16:00		Mar-04-20 16:21		Mar-04-20 16:41		Mar-04-20 17:01		Mar-04-20 17:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.3	50.3	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.3	50.3
Diesel Range Organics (DRO)		<50.0	50.0	<50.3	50.3	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.3	50.3	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.3	50.3
Total GRO-DRO		<50.0	50.0	<50.3	50.3	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.3	50.3
Total TPH		<50.0	50.0	<50.3	50.3	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.3	50.3

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 654476

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012920029
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Mar-04-20 08:50 am
Report Date: 05-MAR-20
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	654476-007		654476-008		654476-009			
	Field Id:	PH03		PH03A		PH03B			
	Depth:	1- ft		3- ft		5- ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-03-20 13:48		Mar-03-20 13:50		Mar-03-20 13:52			
BTEX by EPA 8021B	***Extracted:***	Mar-04-20 11:00		Mar-04-20 11:00		Mar-04-20 11:00			
	Analyzed:	Mar-04-20 18:08		Mar-04-20 18:29		Mar-04-20 18:49			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
m,p-Xylenes		<0.00403	0.00403	<0.00400	0.00400	<0.00403	0.00403		
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00202	0.00202		
Chloride by EPA 300	***Extracted:***	Mar-04-20 12:00		Mar-04-20 12:00		Mar-04-20 12:00			
	Analyzed:	Mar-04-20 16:05		Mar-04-20 16:12		Mar-04-20 16:30			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		1820	49.8	1560	49.9	1520	49.6		
TPH by SW8015 Mod	***Extracted:***	Mar-04-20 13:00		Mar-04-20 13:00		Mar-04-20 13:00			
	Analyzed:	Mar-04-20 17:42		Mar-04-20 18:22		Mar-04-20 18:42			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<50.0	50.0	<50.3	50.3		
Diesel Range Organics (DRO)		<50.1	50.1	<50.0	50.0	<50.3	50.3		
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.0	50.0	<50.3	50.3		
Total GRO-DRO		<50.1	50.1	<50.0	50.0	<50.3	50.3		
Total TPH		<50.1	50.1	<50.0	50.0	<50.3	50.3		

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-001	Date Collected:	03.03.20 12.35	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.0**	10.0	mg/kg	03.04.20 15.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.04.20 15.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.04.20 15.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.04.20 15.40	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.04.20 15.40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.04.20 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.04.20 15.40	
o-Terphenyl	84-15-1	93	%	70-135	03.04.20 15.40	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-001	Date Collected:	03.03.20 12.35	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.04.20 15.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 15.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.04.20 15.25	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 15.25	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id: **PH01A** Matrix: Soil Date Received:03.04.20 08.50

Lab Sample Id: 654476-002 Date Collected: 03.03.20 12.42 Sample Depth: 3 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 03.04.20 12.00 Basis: Wet Weight

Seq Number: 3118582

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**311**	49.9	mg/kg	03.04.20 15.15		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 03.04.20 13.00 Basis: Wet Weight

Seq Number: 3118594

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.04.20 16.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.04.20 16.00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.04.20 16.00	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.04.20 16.00	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.04.20 16.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.04.20 16.00	
o-Terphenyl	84-15-1	95	%	70-135	03.04.20 16.00	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-002	Date Collected:	03.03.20 12.42	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.04.20 15.46	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 15.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 15.46	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.04.20 15.46	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-003	Date Collected:	03.03.20 12.45	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**217**	9.94	mg/kg	03.04.20 15.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.04.20 16.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.04.20 16.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.04.20 16.21	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.04.20 16.21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.04.20 16.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	03.04.20 16.21	
o-Terphenyl	84-15-1	92	%	70-135	03.04.20 16.21	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-003	Date Collected:	03.03.20 12.45	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.04.20 16.06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 16.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.04.20 16.06	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.04.20 16.06	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-004	Date Collected:	03.03.20 12.50	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1680**	50.4	mg/kg	03.04.20 15.28		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.04.20 16.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.04.20 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	03.04.20 16.41	
o-Terphenyl	84-15-1	91	%	70-135	03.04.20 16.41	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-004	Date Collected:	03.03.20 12.50	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	03.04.20 16.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.04.20 16.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	03.04.20 16.26	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 16.26	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-005	Date Collected:	03.03.20 12.53	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1130**	10.0	mg/kg	03.04.20 15.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.04.20 17.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.04.20 17.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.04.20 17.01	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.04.20 17.01	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.04.20 17.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	03.04.20 17.01	
o-Terphenyl	84-15-1	87	%	70-135	03.04.20 17.01	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-005	Date Collected:	03.03.20 12.53	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.04.20 16.47	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 16.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.04.20 16.47	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 16.47	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-006	Date Collected:	03.03.20 12.55	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**157**	9.98	mg/kg	03.04.20 15.41		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.04.20 17.21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.04.20 17.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.04.20 17.21	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.04.20 17.21	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.04.20 17.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.04.20 17.21	
o-Terphenyl	84-15-1	95	%	70-135	03.04.20 17.21	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-006	Date Collected:	03.03.20 12.55	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.04.20 17.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.04.20 17.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.04.20 17.48	
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.04.20 17.48	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-007	Date Collected:	03.03.20 13.48	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1820**	49.8	mg/kg	03.04.20 16.05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.04.20 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.04.20 17.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.04.20 17.42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.04.20 17.42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.04.20 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.04.20 17.42	
o-Terphenyl	84-15-1	99	%	70-135	03.04.20 17.42	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-007	Date Collected:	03.03.20 13.48	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.04.20 18.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 18.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 18.08	
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.04.20 18.08	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-008	Date Collected:	03.03.20 13.50	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1560**	49.9	mg/kg	03.04.20 16.12		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.04.20 18.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.04.20 18.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.04.20 18.22	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.04.20 18.22	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.04.20 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.04.20 18.22	
o-Terphenyl	84-15-1	96	%	70-135	03.04.20 18.22	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-008	Date Collected:	03.03.20 13.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	03.04.20 18.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.04.20 18.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.04.20 18.29	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.04.20 18.29	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-009	Date Collected:	03.03.20 13.52	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 12.00	Basis:	Wet Weight
Seq Number:	3118582				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1520**	49.6	mg/kg	03.04.20 16.30		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.04.20 13.00	Basis:	Wet Weight
Seq Number:	3118594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.04.20 18.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.04.20 18.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.04.20 18.42	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.04.20 18.42	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.04.20 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.04.20 18.42	
o-Terphenyl	84-15-1	97	%	70-135	03.04.20 18.42	

Certificate of Analytical Results 654476

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	03.04.20 08.50
Lab Sample Id:	654476-009	Date Collected:	03.03.20 13.52	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.04.20 11.00	Basis:	Wet Weight
Seq Number:	3118584				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.04.20 18.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.04.20 18.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.04.20 18.49	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.04.20 18.49	

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 654476

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118582 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698066-1-BLK — LCS Sample Id: 7698066-1-BKS — LCSD Sample Id: 7698066-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	258	103	259	104	90-110	0	20	mg/kg	03.04.20 14:06	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118582 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 654474-001 — MS Sample Id: 654474-001 S — MSD Sample Id: 654474-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1850	200	2030	90	2060	105	90-110	1	20	mg/kg	03.04.20 14:24	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118582 — Matrix: Soil — Date Prep: 03.04.20
Parent Sample Id: 654476-006 — MS Sample Id: 654476-006 S — MSD Sample Id: 654476-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	157	199	369	107	380	110	90-110	3	20	mg/kg	03.04.20 15:47	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118594 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698116-1-BLK — LCS Sample Id: 7698116-1-BKS — LCSD Sample Id: 7698116-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	889	89	893	89	70-135	0	35	mg/kg	03.04.20 13:20	
Diesel Range Organics (DRO)	<50.0	1000	892	89	877	88	70-135	2	35	mg/kg	03.04.20 13:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		103		115		70-135	%	03.04.20 13:20
o-Terphenyl	106		111		109		70-135	%	03.04.20 13:20

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118594 — Matrix: Solid — Date Prep: 03.04.20
MB Sample Id: 7698116-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.04.20 13:00	

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

QC Summary 654476

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3118594 | Matrix: Soil | Date Prep: 03.04.20
Parent Sample Id: 654474-003 | MS Sample Id: 654474-003 S | MSD Sample Id: 654474-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	909	91	896	90	70-135	1	35	mg/kg	03.04.20 14:20	
Diesel Range Organics (DRO)	<50.0	999	906	91	892	89	70-135	2	35	mg/kg	03.04.20 14:20	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		106		70-135	%	03.04.20 14:20
o-Terphenyl	109		107		70-135	%	03.04.20 14:20

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118584 | Matrix: Solid | Date Prep: 03.04.20
MB Sample Id: 7698064-1-BLK | LCS Sample Id: 7698064-1-BKS | LCSD Sample Id: 7698064-1-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	0.117	117	0.111	111	70-130	5	35	mg/kg	03.04.20 12:01	
Toluene	<0.00200	0.100	0.113	113	0.107	107	70-130	5	35	mg/kg	03.04.20 12:01	
Ethylbenzene	<0.00200	0.100	0.109	109	0.103	103	71-129	6	35	mg/kg	03.04.20 12:01	
m,p-Xylenes	<0.00400	0.200	0.226	113	0.214	107	70-135	5	35	mg/kg	03.04.20 12:01	
o-Xylene	<0.00200	0.100	0.112	112	0.106	106	71-133	6	35	mg/kg	03.04.20 12:01	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		107		70-130	%	03.04.20 12:01
4-Bromofluorobenzene	94		93		94		70-130	%	03.04.20 12:01

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118584 | Matrix: Soil | Date Prep: 03.04.20
Parent Sample Id: 654474-003 | MS Sample Id: 654474-003 S | MSD Sample Id: 654474-003 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	0.128	129	0.117	117	70-130	9	35	mg/kg	03.04.20 12:42	
Toluene	<0.00199	0.0996	0.124	124	0.113	113	70-130	9	35	mg/kg	03.04.20 12:42	
Ethylbenzene	<0.00199	0.0996	0.118	118	0.107	107	71-129	10	35	mg/kg	03.04.20 12:42	
m,p-Xylenes	<0.00398	0.199	0.245	123	0.221	111	70-135	10	35	mg/kg	03.04.20 12:42	
o-Xylene	<0.00199	0.0996	0.121	121	0.109	109	71-133	10	35	mg/kg	03.04.20 12:42	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		108		70-130	%	03.04.20 12:42
4-Bromofluorobenzene	93		95		70-130	%	03.04.20 12:42

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

Final 1.000

Chain of Custody

Work Order No: 654740

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
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:	Rustler Bluff SWD	Turn Around	
Project Number:	012920029	Routine: ☐	
PO #:	2/3/20 spill date	Rush: 3 days	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	Yes (No)
Temperature (°C):	2.6	Thermometer ID	T-NM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	9

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
PH01	S	3/3/20	1235	1	1	X	X	X
PH01A			1242	3				
PH01B			1245	5				
PH02			1250	1				
PH02A			1253	3				
PH02B			1255	5				
PH03			1348	1				
PH03A			1350	3				
PH03B			1352	5				

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			3-4-20 0845	2		3/4/20 08:50
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Analytical Report 654823

for

LT Environmental, Inc.

Project Manager: Dan Moir

Rustler Bluff SWD

012200029

09-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

09-MAR-20

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

Reference: XENCO Report No(s): **654823**
Rustler Bluff SWD
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) 654823. 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. 654823 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	03-05-20 11:40	5 ft	654823-001
FS02	S	03-05-20 11:42	5 ft	654823-002
FS03	S	03-05-20 11:44	5 ft	654823-003
FS04	S	03-05-20 12:14	5 ft	654823-004
FS05	S	03-05-20 12:15	5 ft	654823-005
FS06	S	03-05-20 12:17	5 ft	654823-006
FS07	S	03-05-20 12:31	5 ft	654823-007
FS08	S	03-05-20 12:33	5 ft	654823-008
FS09	S	03-05-20 12:34	5 ft	654823-009
FS10	S	03-05-20 12:50	5 ft	654823-010
FS11	S	03-05-20 12:52	5 ft	654823-011
FS12	S	03-05-20 12:53	5 ft	654823-012

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Rustler Bluff SWD

Project ID: *012200029*
Work Order Number(s): *654823*

Report Date: *09-MAR-20*
Date Received: *03/06/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118875 BTEX by EPA 8021B

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

Certificate of Analysis Summary 654823

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012200029
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Mar-06-20 12:00 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested		654823-001		654823-002		654823-003		654823-004		654823-005		654823-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	5- ft		5- ft		5- ft		5- ft		5- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-05-20 11:40		Mar-05-20 11:42		Mar-05-20 11:44		Mar-05-20 12:14		Mar-05-20 12:15		Mar-05-20 12:17	
BTEX by EPA 8021B	*Extracted:*	Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00	
	Analyzed:	Mar-06-20 19:50		Mar-06-20 20:11		Mar-06-20 20:31		Mar-06-20 21:32		Mar-06-20 21:53		Mar-06-20 22:13	
	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	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00398	0.00398	<0.00401	0.00401	<0.00394	0.00394	<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00197	0.00197	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	Mar-06-20 14:06		Mar-06-20 14:06		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00	
	Analyzed:	Mar-06-20 15:32		Mar-06-20 15:38		Mar-06-20 18:24		Mar-06-20 18:29		Mar-06-20 18:35		Mar-06-20 18:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		138	10.1	272	9.88	117	10.1	258	9.92	230	9.88	15.0	9.92
TPH by SW8015 Mod	*Extracted:*	Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50	
	Analyzed:	Mar-06-20 18:43		Mar-06-20 19:03		Mar-06-20 19:24		Mar-06-20 20:04		Mar-06-20 20:24		Mar-06-20 20:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Diesel Range Organics (DRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Total GRO-DRO		<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2
Total TPH		<50.0	50.0	<50.1	50.1	<49.9	49.9	<50.2	50.2	<49.8	49.8	<50.2	50.2

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 654823

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012200029
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Mar-06-20 12:00 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	654823-007		654823-008		654823-009		654823-010		654823-011		654823-012	
	Field Id:	FS07		FS08		FS09		FS10		FS11		FS12	
	Depth:	5- ft		5- ft		5- ft		5- ft		5- ft		5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-05-20 12:31		Mar-05-20 12:33		Mar-05-20 12:34		Mar-05-20 12:50		Mar-05-20 12:52		Mar-05-20 12:53	
BTEX by EPA 8021B	***Extracted:***	Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00	
	Analyzed:	Mar-06-20 22:33		Mar-06-20 22:54		Mar-06-20 23:14		Mar-06-20 23:35		Mar-06-20 23:55		Mar-07-20 00:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Toluene		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Ethylbenzene		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
m,p-Xylenes		<0.00394	0.00394	<0.00395	0.00395	<0.00399	0.00399	<0.00399	0.00399	<0.00398	0.00398	<0.00401	0.00401
o-Xylene		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total Xylenes		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Total BTEX		<0.00197	0.00197	<0.00198	0.00198	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00	
	Analyzed:	Mar-06-20 18:57		Mar-06-20 19:03		Mar-06-20 19:08		Mar-06-20 19:14		Mar-06-20 19:19		Mar-06-20 19:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		269	9.94	290	9.98	294	9.94	195	9.96	265	10.0	255	9.94
TPH by SW8015 Mod	***Extracted:***	Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50		Mar-06-20 13:50	
	Analyzed:	Mar-06-20 21:04		Mar-06-20 21:25		Mar-06-20 21:45		Mar-06-20 22:05		Mar-06-20 22:25		Mar-06-20 22:45	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.3	50.3	<50.2	50.2
Diesel Range Organics (DRO)		<49.8	49.8	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.3	50.3	<50.2	50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.3	50.3	<50.2	50.2
Total GRO-DRO		<49.8	49.8	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.3	50.3	<50.2	50.2
Total TPH		<49.8	49.8	<49.9	49.9	<49.9	49.9	<50.0	50.0	<50.3	50.3	<50.2	50.2

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

Jessica Kramer
Project Assistant

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-001	Date Collected:	03.05.20 11.40	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**138**	10.1	mg/kg	03.06.20 15.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.06.20 18.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.06.20 18.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.06.20 18.43	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.06.20 18.43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.06.20 18.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.06.20 18.43	
o-Terphenyl	84-15-1	93	%	70-135	03.06.20 18.43	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-001	Date Collected:	03.05.20 11.40	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.06.20 19.50	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.06.20 19.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 19.50	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.06.20 19.50	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-002	Date Collected:	03.05.20 11.42	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**272**	9.88	mg/kg	03.06.20 15.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.06.20 19.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.06.20 19.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.06.20 19.03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.06.20 19.03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.06.20 19.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.06.20 19.03	
o-Terphenyl	84-15-1	94	%	70-135	03.06.20 19.03	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-002	Date Collected:	03.05.20 11.42	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.06.20 20.11	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.20 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.06.20 20.11	
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.06.20 20.11	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-003	Date Collected:	03.05.20 11.44	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	10.1	mg/kg	03.06.20 18.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.06.20 19.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.06.20 19.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.06.20 19.24	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.06.20 19.24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.06.20 19.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	03.06.20 19.24	
o-Terphenyl	84-15-1	95	%	70-135	03.06.20 19.24	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-003	Date Collected:	03.05.20 11.44	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	03.06.20 20.31	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1
Total BTEX		<0.00197	0.00197	mg/kg	03.06.20 20.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.06.20 20.31	
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.06.20 20.31	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-004	Date Collected:	03.05.20 12.14	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**258**	9.92	mg/kg	03.06.20 18.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 20.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 20.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 20.04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 20.04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 20.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.06.20 20.04	
o-Terphenyl	84-15-1	93	%	70-135	03.06.20 20.04	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-004	Date Collected:	03.05.20 12.14	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.06.20 21.32	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.06.20 21.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	03.06.20 21.32	
4-Bromofluorobenzene	460-00-4	98	%	70-130	03.06.20 21.32	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-005	Date Collected:	03.05.20 12.15	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**230**	9.88	mg/kg	03.06.20 18.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.06.20 20.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.06.20 20.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.06.20 20.24	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.06.20 20.24	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.06.20 20.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.06.20 20.24	
o-Terphenyl	84-15-1	90	%	70-135	03.06.20 20.24	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-005	Date Collected:	03.05.20 12.15	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.06.20 21.53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.06.20 21.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.06.20 21.53	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 21.53	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-006	Date Collected:	03.05.20 12.17	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.0**	9.92	mg/kg	03.06.20 18.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 20.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 20.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 20.44	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 20.44	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 20.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	03.06.20 20.44	
o-Terphenyl	84-15-1	87	%	70-135	03.06.20 20.44	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-006	Date Collected:	03.05.20 12.17	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.06.20 22.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.20 22.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.06.20 22.13	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 22.13	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-007	Date Collected:	03.05.20 12.31	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**269**	9.94	mg/kg	03.06.20 18.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	03.06.20 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	03.06.20 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	03.06.20 21.04	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	03.06.20 21.04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	03.06.20 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	03.06.20 21.04	
o-Terphenyl	84-15-1	90	%	70-135	03.06.20 21.04	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-007	Date Collected:	03.05.20 12.31	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1
Toluene	108-88-3	<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1
Ethylbenzene	100-41-4	<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1
m,p-Xylenes	179601-23-1	<0.00394	0.00394	mg/kg	03.06.20 22.33	U	1
o-Xylene	95-47-6	<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1
Total Xylenes	1330-20-7	<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1
Total BTEX		<0.00197	0.00197	mg/kg	03.06.20 22.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.06.20 22.33	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.06.20 22.33	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-008	Date Collected:	03.05.20 12.33	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**290**	9.98	mg/kg	03.06.20 19.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.06.20 21.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.06.20 21.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.06.20 21.25	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.06.20 21.25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.06.20 21.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.06.20 21.25	
o-Terphenyl	84-15-1	91	%	70-135	03.06.20 21.25	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS08**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-008	Date Collected:	03.05.20 12.33	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	03.06.20 22.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	03.06.20 22.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 22.54	
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.06.20 22.54	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-009	Date Collected:	03.05.20 12.34	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**294**	9.94	mg/kg	03.06.20 19.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	03.06.20 21.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	03.06.20 21.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	03.06.20 21.45	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	03.06.20 21.45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	03.06.20 21.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.06.20 21.45	
o-Terphenyl	84-15-1	95	%	70-135	03.06.20 21.45	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS09**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-009	Date Collected:	03.05.20 12.34	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.06.20 23.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.20 23.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 23.14	
4-Bromofluorobenzene	460-00-4	96	%	70-130	03.06.20 23.14	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-010	Date Collected:	03.05.20 12.50	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**195**	9.96	mg/kg	03.06.20 19.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	03.06.20 22.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	03.06.20 22.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	03.06.20 22.05	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	03.06.20 22.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	03.06.20 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	03.06.20 22.05	
o-Terphenyl	84-15-1	91	%	70-135	03.06.20 22.05	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS10**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-010	Date Collected:	03.05.20 12.50	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.06.20 23.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.20 23.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.06.20 23.35	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.06.20 23.35	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-011	Date Collected:	03.05.20 12.52	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**265**	10.0	mg/kg	03.06.20 19.19		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.06.20 22.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.06.20 22.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.06.20 22.25	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.06.20 22.25	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.06.20 22.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.06.20 22.25	
o-Terphenyl	84-15-1	93	%	70-135	03.06.20 22.25	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS11**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-011	Date Collected:	03.05.20 12.52	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.06.20 23.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.06.20 23.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.06.20 23.55	
1,4-Difluorobenzene	540-36-3	107	%	70-130	03.06.20 23.55	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-012	Date Collected:	03.05.20 12.53	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118881				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**255**	9.94	mg/kg	03.06.20 19.25		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 22.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 22.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 22.45	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 22.45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 22.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	03.06.20 22.45	
o-Terphenyl	84-15-1	91	%	70-135	03.06.20 22.45	

Certificate of Analytical Results 654823

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS12**	Matrix:	Soil	Date Received:	03.06.20 12.00
Lab Sample Id:	654823-012	Date Collected:	03.05.20 12.53	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.07.20 00.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.07.20 00.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.07.20 00.15	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.07.20 00.15	

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 654823

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118879 — Matrix: Solid — Date Prep: 03.06.20
MB Sample Id: 7698303-1-BLK — LCS Sample Id: 7698303-1-BKS — LCSD Sample Id: 7698303-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	264	106	265	106	90-110	0	20	mg/kg	03.06.20 14:09	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118881 — Matrix: Solid — Date Prep: 03.06.20
MB Sample Id: 7698304-1-BLK — LCS Sample Id: 7698304-1-BKS — LCSD Sample Id: 7698304-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	263	105	265	106	90-110	1	20	mg/kg	03.06.20 17:56	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118879 — Matrix: Soil — Date Prep: 03.06.20
Parent Sample Id: 654823-002 — MS Sample Id: 654823-002 S — MSD Sample Id: 654823-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	272	198	483	107	484	107	90-110	0	20	mg/kg	03.06.20 15:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118879 — Matrix: Soil — Date Prep: 03.06.20
Parent Sample Id: 654824-002 — MS Sample Id: 654824-002 S — MSD Sample Id: 654824-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	347	199	557	106	557	106	90-110	0	20	mg/kg	03.06.20 14:25	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3118881 — Matrix: Soil — Date Prep: 03.06.20
Parent Sample Id: 654823-012 — MS Sample Id: 654823-012 S — MSD Sample Id: 654823-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	255	199	465	106	466	106	90-110	0	20	mg/kg	03.06.20 19:31	

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 654823

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118881 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654846-003 MS Sample Id: 654846-003 S MSD Sample Id: 654846-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	145	202	373	113	367	110	90-110	2	20	mg/kg	03.06.20 18:13	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3118880 Matrix: Solid Date Prep: 03.06.20
MB Sample Id: 7698291-1-BLK LCS Sample Id: 7698291-1-BKS LCSD Sample Id: 7698291-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	924	92	920	92	70-135	0	35	mg/kg	03.06.20 12:30	
Diesel Range Organics (DRO)	<50.0	1000	842	84	830	83	70-135	1	35	mg/kg	03.06.20 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		116		115		70-135	%	03.06.20 12:30
o-Terphenyl	95		100		99		70-135	%	03.06.20 12:30

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3118880 Matrix: Solid Date Prep: 03.06.20
MB Sample Id: 7698291-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.06.20 12:10	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3118880 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654820-001 MS Sample Id: 654820-001 S MSD Sample Id: 654820-001 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)	<49.9	997	878	88	898	90	70-135	2	35	mg/kg	03.06.20 16:01	
Diesel Range Organics (DRO)	70.3	997	808	74	825	75	70-135	2	35	mg/kg	03.06.20 16:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		102		70-135	%	03.06.20 16:01
o-Terphenyl	97		99		70-135	%	03.06.20 16:01

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 654823

LT Environmental, Inc.

Rustler Bluff SWD

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

Seq Number: 3118875 Matrix: Solid Date Prep: 03.06.20

MB Sample Id: 7698329-1-BLK LCS Sample Id: 7698329-1-BKS LCSD Sample Id: 7698329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.114	114	70-130	2	35	mg/kg	03.06.20 15:46	
Toluene	<0.00200	0.100	0.107	107	0.109	109	70-130	2	35	mg/kg	03.06.20 15:46	
Ethylbenzene	<0.00200	0.100	0.102	102	0.105	105	71-129	3	35	mg/kg	03.06.20 15:46	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.217	109	70-135	3	35	mg/kg	03.06.20 15:46	
o-Xylene	<0.00200	0.100	0.105	105	0.109	109	71-133	4	35	mg/kg	03.06.20 15:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		108		70-130	%	03.06.20 15:46
4-Bromofluorobenzene	93		90		93		70-130	%	03.06.20 15:46

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

Seq Number: 3118875 Matrix: Soil Date Prep: 03.06.20

Parent Sample Id: 654820-001 MS Sample Id: 654820-001 S MSD Sample Id: 654820-001 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	0.127	127	0.127	127	70-130	0	35	mg/kg	03.06.20 16:26	
Toluene	<0.00200	0.0998	0.122	122	0.123	123	70-130	1	35	mg/kg	03.06.20 16:26	
Ethylbenzene	<0.00200	0.0998	0.117	117	0.117	117	71-129	0	35	mg/kg	03.06.20 16:26	
m,p-Xylenes	<0.00399	0.200	0.241	121	0.242	121	70-135	0	35	mg/kg	03.06.20 16:26	
o-Xylene	<0.00200	0.0998	0.119	119	0.118	118	71-133	1	35	mg/kg	03.06.20 16:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.06.20 16:26
4-Bromofluorobenzene	92		90		70-130	%	03.06.20 16:26

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

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

Work Order No: 454823

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, Inc.
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:	Rustler Bluff SWD	Turn Around	
Project Number:	012920029	Routine: ☐	
PO #:	2/3/20 spill date	Rush: 3 days	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.0	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	3

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS01	S	3/5/20	1140	5'	1	X	X	X
FS02			1142					
FS03			1144					
FS04			1214					
FS05			1215					
FS06			1217					
FS07			1231					
FS08			1233					
FS09			1234					
FS10	↓	↓	1250	↓	↓	↓	↓	↓

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			3/6/20 @ 1148	2		3/6/20 1200
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Chain of Custody

Work Order No: 654823

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800

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, Inc.
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:	Rustler Bluff SWD	Turn Around	
Project Number:	012920029	Routine: ☐	
PO #:	2/3/20 spill date	Rush: 3 days	
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)
FS11	S	3/5/20	1252	5'	1	X	X	X
FS12	S	3/5/20	1253	5'	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			3/6/20 @1140	2		3/6/20 1200
3				4		
5				6		

Revised Date101419 Rev. 2019.1

Analytical Report 654844

for

LT Environmental, Inc.

Project Manager: Dan Moir

Rustler Bluff SWD

012920029

09-MAR-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

09-MAR-20

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

Reference: XENCO Report No(s): **654844**
Rustler Bluff SWD
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) 654844. 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. 654844 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS13	S	03-06-20 09:21	5 ft	654844-001
SW01	S	03-06-20 09:31	0 - 5 ft	654844-002
SW02	S	03-06-20 09:32	0 - 5 ft	654844-003
SW03	S	03-06-20 09:36	0 - 5 ft	654844-004
SW04	S	03-06-20 09:37	0 - 5 ft	654844-005
SW05	S	03-06-20 09:40	0 - 5 ft	654844-006
SW06	S	03-06-20 10:09	0 - 5 ft	654844-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Rustler Bluff SWD

Project ID: *012920029*
Work Order Number(s): *654844*

Report Date: *09-MAR-20*
Date Received: *03/06/2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3118875 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3118876 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 654844

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012920029
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Mar-06-20 01:27 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	654844-001		654844-002		654844-003		654844-004		654844-005		654844-006	
	Field Id:	FS13		SW01		SW02		SW03		SW04		SW05	
	Depth:	5- ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Mar-06-20 09:21		Mar-06-20 09:31		Mar-06-20 09:32		Mar-06-20 09:36		Mar-06-20 09:37		Mar-06-20 09:40	
BTEX by EPA 8021B	***Extracted:***	Mar-06-20 14:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00		Mar-06-20 15:00	
	Analyzed:	Mar-07-20 00:36		Mar-06-20 17:19		Mar-06-20 17:39		Mar-06-20 18:00		Mar-06-20 18:20		Mar-06-20 18:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
Toluene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
Ethylbenzene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
m,p-Xylenes		<0.00402	0.00402	<0.00399	0.00399	<0.00402	0.00402	<0.00398	0.00398	<0.00404	0.00404	<0.00403	0.00403
o-Xylene		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
Total Xylenes		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
Total BTEX		<0.00201	0.00201	<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Mar-06-20 14:06		Mar-06-20 14:06		Mar-06-20 14:06		Mar-06-20 14:06		Mar-06-20 14:06		Mar-06-20 14:06	
	Analyzed:	Mar-06-20 16:32		Mar-06-20 16:38		Mar-06-20 17:00		Mar-06-20 17:06		Mar-06-20 17:11		Mar-06-20 17:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		270	10.0	192	10.1	<10.1	10.1	56.2	9.96	117	9.96	74.4	9.96
TPH by SW8015 Mod	***Extracted:***	Mar-06-20 13:50		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00		Mar-06-20 14:00	
	Analyzed:	Mar-06-20 23:05		Mar-06-20 15:41		Mar-06-20 16:41		Mar-06-20 17:02		Mar-06-20 17:22		Mar-06-20 17:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Diesel Range Organics (DRO)		<50.3	50.3	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Total GRO-DRO		<50.3	50.3	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3
Total TPH		<50.3	50.3	<50.2	50.2	<50.2	50.2	<50.1	50.1	<50.2	50.2	<50.3	50.3

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 654844

LT Environmental, Inc., Arvada, CO

Project Name: Rustler Bluff SWD

Project Id: 012920029
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Mar-06-20 01:27 pm
Report Date: 09-MAR-20
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	654844-007					
	Field Id:	SW06					
	Depth:	0-5 ft					
	Matrix:	SOIL					
	Sampled:	Mar-06-20 10:09					
BTEX by EPA 8021B	***Extracted:***	Mar-06-20 15:00					
	Analyzed:	Mar-06-20 19:01					
	Units/RL:	mg/kg	RL				
Benzene		<0.00201	0.00201				
Toluene		<0.00201	0.00201				
Ethylbenzene		<0.00201	0.00201				
m,p-Xylenes		<0.00402	0.00402				
o-Xylene		<0.00201	0.00201				
Total Xylenes		<0.00201	0.00201				
Total BTEX		<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	Mar-06-20 14:06					
	Analyzed:	Mar-06-20 17:22					
	Units/RL:	mg/kg	RL				
Chloride		108	9.96				
TPH by SW8015 Mod	***Extracted:***	Mar-06-20 14:00					
	Analyzed:	Mar-06-20 18:03					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1				
Diesel Range Organics (DRO)		<50.1	50.1				
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1				
Total GRO-DRO		<50.1	50.1				
Total TPH		<50.1	50.1				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-001	Date Collected:	03.06.20 09.21	Sample Depth:	5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**270**	10.0	mg/kg	03.06.20 16.32		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 13.50	Basis:	Wet Weight
Seq Number:	3118880				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.06.20 23.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.06.20 23.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.06.20 23.05	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.06.20 23.05	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.06.20 23.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	03.06.20 23.05	
o-Terphenyl	84-15-1	94	%	70-135	03.06.20 23.05	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**FS13**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-001	Date Collected:	03.06.20 09.21	Sample Depth:	5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118875				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.07.20 00.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.07.20 00.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	03.07.20 00.36	
1,4-Difluorobenzene	540-36-3	108	%	70-130	03.07.20 00.36	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-002	Date Collected:	03.06.20 09.31	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**192**	10.1	mg/kg	03.06.20 16.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 15.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 15.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 15.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 15.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 15.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	03.06.20 15.41	
o-Terphenyl	84-15-1	103	%	70-135	03.06.20 15.41	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW01**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-002	Date Collected:	03.06.20 09.31	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.06.20 17.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.06.20 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	03.06.20 17.19	
4-Bromofluorobenzene	460-00-4	93	%	70-130	03.06.20 17.19	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-003	Date Collected:	03.06.20 09.32	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.1	10.1	mg/kg	03.06.20 17.00	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 16.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 16.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 16.41	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 16.41	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 16.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.06.20 16.41	
o-Terphenyl	84-15-1	107	%	70-135	03.06.20 16.41	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW02**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-003	Date Collected:	03.06.20 09.32	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.06.20 17.39	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.06.20 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.06.20 17.39	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.06.20 17.39	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-004	Date Collected:	03.06.20 09.36	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**56.2**	9.96	mg/kg	03.06.20 17.06		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.06.20 17.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.06.20 17.02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.06.20 17.02	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.06.20 17.02	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.06.20 17.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	03.06.20 17.02	
o-Terphenyl	84-15-1	120	%	70-135	03.06.20 17.02	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW03**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-004	Date Collected:	03.06.20 09.36	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.06.20 18.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.06.20 18.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.06.20 18.00	
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.06.20 18.00	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-005	Date Collected:	03.06.20 09.37	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**117**	9.96	mg/kg	03.06.20 17.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	03.06.20 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	03.06.20 17.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	03.06.20 17.22	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	03.06.20 17.22	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	03.06.20 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	03.06.20 17.22	
o-Terphenyl	84-15-1	112	%	70-135	03.06.20 17.22	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW04**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-005	Date Collected:	03.06.20 09.37	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	03.06.20 18.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.06.20 18.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	03.06.20 18.20	
1,4-Difluorobenzene	540-36-3	112	%	70-130	03.06.20 18.20	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-006	Date Collected:	03.06.20 09.40	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.4**	9.96	mg/kg	03.06.20 17.17		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	03.06.20 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	03.06.20 17.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	03.06.20 17.42	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	03.06.20 17.42	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	03.06.20 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	03.06.20 17.42	
o-Terphenyl	84-15-1	104	%	70-135	03.06.20 17.42	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW05**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-006	Date Collected:	03.06.20 09.40	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.06.20 18.40	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.06.20 18.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	03.06.20 18.40	
1,4-Difluorobenzene	540-36-3	113	%	70-130	03.06.20 18.40	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-007	Date Collected:	03.06.20 10.09	Sample Depth:	0 - 5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 14.06	Basis:	Wet Weight
Seq Number:	3118879				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**108**	9.96	mg/kg	03.06.20 17.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	03.06.20 14.00	Basis:	Wet Weight
Seq Number:	3118898				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	03.06.20 18.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	03.06.20 18.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	03.06.20 18.03	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	03.06.20 18.03	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	03.06.20 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	03.06.20 18.03	
o-Terphenyl	84-15-1	115	%	70-135	03.06.20 18.03	

Certificate of Analytical Results 654844

LT Environmental, Inc., Arvada, CO

Rustler Bluff SWD

Sample Id:	**SW06**	Matrix:	Soil	Date Received:	03.06.20 13.27
Lab Sample Id:	654844-007	Date Collected:	03.06.20 10.09	Sample Depth:	0 - 5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	03.06.20 15.00	Basis:	Wet Weight
Seq Number:	3118876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.06.20 19.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.06.20 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	03.06.20 19.01	
1,4-Difluorobenzene	540-36-3	111	%	70-130	03.06.20 19.01	

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 654844

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118879 Matrix: Solid Date Prep: 03.06.20
MB Sample Id: 7698303-1-BLK LCS Sample Id: 7698303-1-BKS LCSD Sample Id: 7698303-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	264	106	265	106	90-110	0	20	mg/kg	03.06.20 14:09	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118879 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654823-002 MS Sample Id: 654823-002 S MSD Sample Id: 654823-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	272	198	483	107	484	107	90-110	0	20	mg/kg	03.06.20 15:44	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3118879 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654824-002 MS Sample Id: 654824-002 S MSD Sample Id: 654824-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	347	199	557	106	557	106	90-110	0	20	mg/kg	03.06.20 14:25	

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3118880 Matrix: Solid Date Prep: 03.06.20
MB Sample Id: 7698291-1-BLK LCS Sample Id: 7698291-1-BKS LCSD Sample Id: 7698291-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	924	92	920	92	70-135	0	35	mg/kg	03.06.20 12:30	
Diesel Range Organics (DRO)	<50.0	1000	842	84	830	83	70-135	1	35	mg/kg	03.06.20 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		116		115		70-135	%	03.06.20 12:30
o-Terphenyl	95		100		99		70-135	%	03.06.20 12:30

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 654844

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118898 — Matrix: Solid — Date Prep: 03.06.20
MB Sample Id: 7698292-1-BLK — LCS Sample Id: 7698292-1-BKS — LCSD Sample Id: 7698292-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	805	81	816	82	70-135	1	35	mg/kg	03.06.20 12:30	
Diesel Range Organics (DRO)	<50.0	1000	791	79	794	79	70-135	0	35	mg/kg	03.06.20 12:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	85		92		93		70-135	%	03.06.20 12:30
o-Terphenyl	96		98		98		70-135	%	03.06.20 12:30

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118880 — Matrix: Solid — Date Prep: 03.06.20
MB Sample Id: 7698291-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.06.20 12:10	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118898 — Matrix: Solid — Date Prep: 03.06.20
MB Sample Id: 7698292-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	03.06.20 12:10	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3118880 — Matrix: Soil — Date Prep: 03.06.20
Parent Sample Id: 654820-001 — MS Sample Id: 654820-001 S — MSD Sample Id: 654820-001 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)	<49.9	997	878	88	898	90	70-135	2	35	mg/kg	03.06.20 16:01	
Diesel Range Organics (DRO)	70.3	997	808	74	825	75	70-135	2	35	mg/kg	03.06.20 16:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		102		70-135	%	03.06.20 16:01
o-Terphenyl	97		99		70-135	%	03.06.20 16:01

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

QC Summary 654844

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3118898 | Matrix: Soil | Date Prep: 03.06.20
Parent Sample Id: 654844-002 | MS Sample Id: 654844-002 S | MSD Sample Id: 654844-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	947	94	988	99	70-135	4	35	mg/kg	03.07.20 05:45	
Diesel Range Organics (DRO)	<50.3	1010	912	90	952	95	70-135	4	35	mg/kg	03.07.20 05:45	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	107		113		70-135	%	03.07.20 05:45
o-Terphenyl	117		121		70-135	%	03.07.20 05:45

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118875 | Matrix: Solid | Date Prep: 03.06.20
MB Sample Id: 7698329-1-BLK | LCS Sample Id: 7698329-1-BKS | LCSD Sample Id: 7698329-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.112	112	0.114	114	70-130	2	35	mg/kg	03.06.20 15:46	
Toluene	<0.00200	0.100	0.107	107	0.109	109	70-130	2	35	mg/kg	03.06.20 15:46	
Ethylbenzene	<0.00200	0.100	0.102	102	0.105	105	71-129	3	35	mg/kg	03.06.20 15:46	
m,p-Xylenes	<0.00400	0.200	0.210	105	0.217	109	70-135	3	35	mg/kg	03.06.20 15:46	
o-Xylene	<0.00200	0.100	0.105	105	0.109	109	71-133	4	35	mg/kg	03.06.20 15:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		108		70-130	%	03.06.20 15:46
4-Bromofluorobenzene	93		90		93		70-130	%	03.06.20 15:46

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3118876 | Matrix: Solid | Date Prep: 03.06.20
MB Sample Id: 7698330-1-BLK | LCS Sample Id: 7698330-1-BKS | LCSD Sample Id: 7698330-1-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	0.123	123	0.121	121	70-130	2	35	mg/kg	03.06.20 15:37	
Toluene	<0.00200	0.100	0.113	113	0.120	120	70-130	6	35	mg/kg	03.06.20 15:37	
Ethylbenzene	<0.00200	0.100	0.107	107	0.114	114	71-129	6	35	mg/kg	03.06.20 15:37	
m,p-Xylenes	<0.00400	0.200	0.208	104	0.223	112	70-135	7	35	mg/kg	03.06.20 15:37	
o-Xylene	<0.00200	0.100	0.105	105	0.113	113	71-133	7	35	mg/kg	03.06.20 15:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	113		111		111		70-130	%	03.06.20 15:37
4-Bromofluorobenzene	93		90		91		70-130	%	03.06.20 15:37

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

Final 1.000

QC Summary 654844

LT Environmental, Inc.

Rustler Bluff SWD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3118875 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654820-001 MS Sample Id: 654820-001 S MSD Sample Id: 654820-001 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	0.127	127	0.127	127	70-130	0	35	mg/kg	03.06.20 16:26	
Toluene	<0.00200	0.0998	0.122	122	0.123	123	70-130	1	35	mg/kg	03.06.20 16:26	
Ethylbenzene	<0.00200	0.0998	0.117	117	0.117	117	71-129	0	35	mg/kg	03.06.20 16:26	
m,p-Xylenes	<0.00399	0.200	0.241	121	0.242	121	70-135	0	35	mg/kg	03.06.20 16:26	
o-Xylene	<0.00200	0.0998	0.119	119	0.118	118	71-133	1	35	mg/kg	03.06.20 16:26	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		107		70-130	%	03.06.20 16:26
4-Bromofluorobenzene	92		90		70-130	%	03.06.20 16:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3118876 Matrix: Soil Date Prep: 03.06.20
Parent Sample Id: 654844-002 MS Sample Id: 654844-002 S MSD Sample Id: 654844-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.108	108	0.110	110	70-130	2	35	mg/kg	03.07.20 05:13	
Toluene	<0.00200	0.0998	0.0983	98	0.0999	100	70-130	2	35	mg/kg	03.07.20 05:13	
Ethylbenzene	<0.00200	0.0998	0.0928	93	0.0945	95	71-129	2	35	mg/kg	03.07.20 05:13	
m,p-Xylenes	<0.00399	0.200	0.181	91	0.184	92	70-135	2	35	mg/kg	03.07.20 05:13	
o-Xylene	<0.00200	0.0998	0.0924	93	0.0940	94	71-133	2	35	mg/kg	03.07.20 05:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	112		111		70-130	%	03.07.20 05:13
4-Bromofluorobenzene	90		91		70-130	%	03.07.20 05:13

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

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

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

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

Final 1.000

Chain of Custody

Work Order No: 654844

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, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
Atlanta, GA (770) 449-8800
www.xenco.com

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian Office	Company Name:	XTO Energy, Inc.
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:	Rustler Bluff SWD	Turn Around	
Project Number:	012920029	Routine: ☐	
PO #:	2/3/20 spill date	Rush: 3 days	
Sampler's Name:	Fatima Smith	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	2.0	Thermometer ID		
Received Intact:	(Yes) No	T-NM-007		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:	7	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
FS13	S	3/6/20	0921	5'	1	X	X	X
SW01	S		0931	0-5'				
SW02	S		0932	0-5'				
SW03	S		0936	0-5'				
SW04	S		0937	0-5'				
SW05	S		0940	0-5'				
SW06	S	↓	1009	0-5'	↓	↓	↓	↓

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			3/6/2013:27	2		
3				4		
5				6		

ATTACHMENT 4: LITHOLOGIC SOIL SAMPLE LOGS

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: PH01	Date: 3/3/2020
Site Name: Rustler Bluff SWD	
RP or Incident Number:	
LTE Job Number: 12920029	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Trackhoe		
Lat/Long:	Field Screening: Chloride, PID	Hole Diameter:	Total Depth: 5'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	<173	8.2	N	PH01	1	1'	SP	silty SAND, dry, reddish brown, poorly graded, fine-very fine, no stain, no odor
D	436	1.1	N	PH01A	3			
D	235	0.7	N	PH01B	5	5'		Total Depth 5 ft bgs

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: PH02	Date: 3/3/2020
Site Name: Rustler Bluff SWD	
RP or Incident Number:	
LTE Job Number: 12920029	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Trackhoe		
Lat/Long:	Field Screening: Chloride, PID	Hole Diameter:	Total Depth: 5'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	CALICHE, dry, tan-off white, poorly consolidated, no stain, no odor
D	2,128	0.0	N	PH02	1	1'	SP	silty SAND, dry, reddish brown, poorly graded, fine-very fine, no stain, no odor
D	1,383	0.1	N	PH02A	3			
D	207	0.1	N	PH02B	5	5'		Total Depth 5 ft bgs

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
A proud member of WSP
Compliance · Engineering · Remediation

BH or PH Name: PH03	Date: 3/3/2020
Site Name: Rustler Bluff SWD	
RP or Incident Number:	
LTE Job Number: 12920029	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: FS	Method: Trackhoe		
Lat/Long:	Field Screening: Chloride, PID	Hole Diameter:	Total Depth: 5'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	SP	silty SAND, dry, reddish brown, poorly graded, fine-very fine, no stain, no odor
D	2,620	0.7	N	PH03	1	1'		
D	2,279	0.4	N	PH03A	3			
D	2,441	2.8	N	PH03B	5	5'		Total Depth 5 ft bgs