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	NRM2011453506
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
L				

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

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011453506
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?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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

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

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: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: Ramona Marcus Date: 4/23/2020

Location:	PLU 25 BD 121H	
Spill Date:	2/5/2020	
Area 1		
Approximate Area =	4488.00	sq. ft.
Average Saturation (or depth) of spill =	2.50	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Recycled Produced Water =	5.00	bbls
Area 2		
Approximate Area =	11.23	cu. ft.
Average Saturation (or depth) of spill =	0.00	inches

Average Porosity Factor =	0.00	

VOLUME RECOVERED		
Total Recycled Produced Water =	2.00	bbls

TOTAL VOLUME OF LEAK		
Total Produced Water =	**7.00**	**bbls**
TOTAL VOLUME RECOVERED		
Total Produced Water =	**2.00**	**bbls**

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011453506
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

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.

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011453506
District RP	
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 08/31/2020

email: Kyle_Littrell@xtoenergy.com Telephone: _____

OCD Only

Received by: _____ Date: _____

Form C-141
Page 6

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011453506
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: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

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
Poker Lake Unit 25 BD 121H
Incident Number NRM2011453506
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 sampling, and remediation activities at the Poker Lake Unit (PLU) 25 BD 121H (Site) in Unit L, Section 25, 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 confirm the presence or absence of impacts to soil by a release of recycled produced water at the Site. Based on field observations, field screenings, and laboratory analytical results from soil sampling activities, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2011453506.

RELEASE BACKGROUND

On February 5, 2020, a connection on the discharge side of a pump failed, resulting in the release of 7 barrels (bbls) of recycled produced water into a lined containment and onto the surrounding well pad. A vacuum truck was immediately dispatched to the Site to recover freestanding fluids, of which approximately 2 bbls of recycled produced water were recovered. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Form C-141 on April 22, 2020.

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 closest permitted groundwater well with depth to groundwater data is New Mexico Office of the State Engineer (NMOSE) well C-03781, located approximately 1.8 miles north of the Site. The groundwater well has a reported depth to groundwater of 325 feet bgs and a total depth of 720 feet bgs. There are 5 wells within a 3.2-mile radius of the Site with similar depth to water measurements indicating regional depth to water is greater than 160 feet bgs. NMOSE well C-03872 was most recently sampled in January

2015 with a depth to groundwater of 277 feet. Based on the information from these wells the regional depth to water for the Site is determined to be greater than 100 feet bgs. All wells used for depth to groundwater determination 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 an intermittent streambed, located approximately 746 feet northeast 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). Site receptors are identified 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

SITE ASSESSMENT AND DELINEATION ACTIVITIES

On April 22, 2020, LTE personnel visited the Site to evaluate the release extent. The release extent and preliminary soil sample locations were mapped utilizing a handheld Global Positing System (GPS). The release occurred within the lined containment and overflowing on to the immediate area northeast of the lined containment. LTE personnel collected and field screened three preliminary soil assessment samples at three locations (SS01 through SS03) within the release extent. Locations of soil samples are presented on Figure 2. Photographic documentation was conducted during the visit to the Site and is included in Attachment 2.

The three soil samples were collected at a depth of 0.5 feet below grade surface (bgs). Preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. All 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 transported 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.

According to laboratory analytical results, benzene, BTEX, TPH-GRO and TPH-DRO, TPH, and chloride were reported at concentrations below the Closure Criteria in the preliminary assessment soil samples SS01 through SS03. Based on field screening results, and laboratory analytical results, soil excavation did not appear to be warranted for the release area, however further delineation of the Site was scheduled to determine the presence or absence of impacts in the subsurface.

On April 27, 2020, LTE personnel returned to the Site to oversee additional soil assessment activities. Three potholes (SS01A/SS01B through SS03A/SS03B) were advanced using track-mounted backhoe, to a depth of four feet within the release extent. Potholes SS01A/SS01B through SS03A/SS03B were advanced at SS01 thought SS03 preliminary soil sample locations, respectively.

Discrete soil samples were collected from each pothole at depths of 2 feet bgs and 4 feet bgs. Soil from the delineation soil samples was field screened for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach© chloride QuanTab© test strips, respectively. Field screening results and observations for each pothole were logged on lithologic/soil sampling logs, which are included in Attachment 3. The locations of delineation potholes (SS01A/SS01B through SS03A/SS03B) are presented on Figure 2. The discrete delineation soil samples were collected, handled, and analyzed as described above at Xenco in Carlsbad, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria in soil samples SS01 through SS03 collected at approximately 0.5 feet bgs and in the six delineation soil samples (SS01A/SS01B through SS03A/SS03B) collected at 2 feet and 4 feet bgs. The laboratory analytical results are summarized in Table 1 and the laboratory analytical reports are provided in Attachment 4. In addition, delineation soil samples SS01B through SS03B collected at 4 feet bgs indicate the Site is delineated to the strictest Closure Criteria for soil concentrations of TPH and chloride.

CLOSURE REQUEST

Preliminary soil samples SS01 through SS03 and delineation soil samples SS01A/SS01B through SS03A/SS03B were collected from within the release extent from depths ranging from 0.5 feet to four feet bgs to assess for the presence or absence of soil impacts as a result of the release on February 5, 2020. Laboratory analytical results for all soil samples indicated benzene, BTEX, TPH-GRO, TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Based on initial response efforts, soil sample laboratory analytical results compliant with the Closure Criteria, and regional depth to groundwater determined to be greater than 100 feet bgs, no soil excavation was deemed warranted. In addition, delineation soil samples SS01B through SS03B collected at 4 feet bgs indicate the Site is delineated to the strictest Closure Criteria for soil concentrations of TPH and chloride. As such, XTO requests NFA for the release of recycled produced on February 5, 2020 and respectfully requests closure of Incident Number NRM2011453506.

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

Sincerely,

LT ENVIRONMENTAL, INC.

Elizabeth A. Naka
Staff Environmental Scientist

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
United States Bureau of Land Management
Robert Hamlet, NMOCD
Victoria Venegas, NMOCD

Appendices:
Figure 1 Site Location Map
Figure 2 Preliminary Soil Sample Locations
Table 1 Soil Analytical Results
Attachment 1 Referenced Well Logs
Attachment 2 Photographic Log
Attachment 3 Lithologic/Soil Sampling Logs
Attachment 4 Laboratory Analytical Results

FIGURES

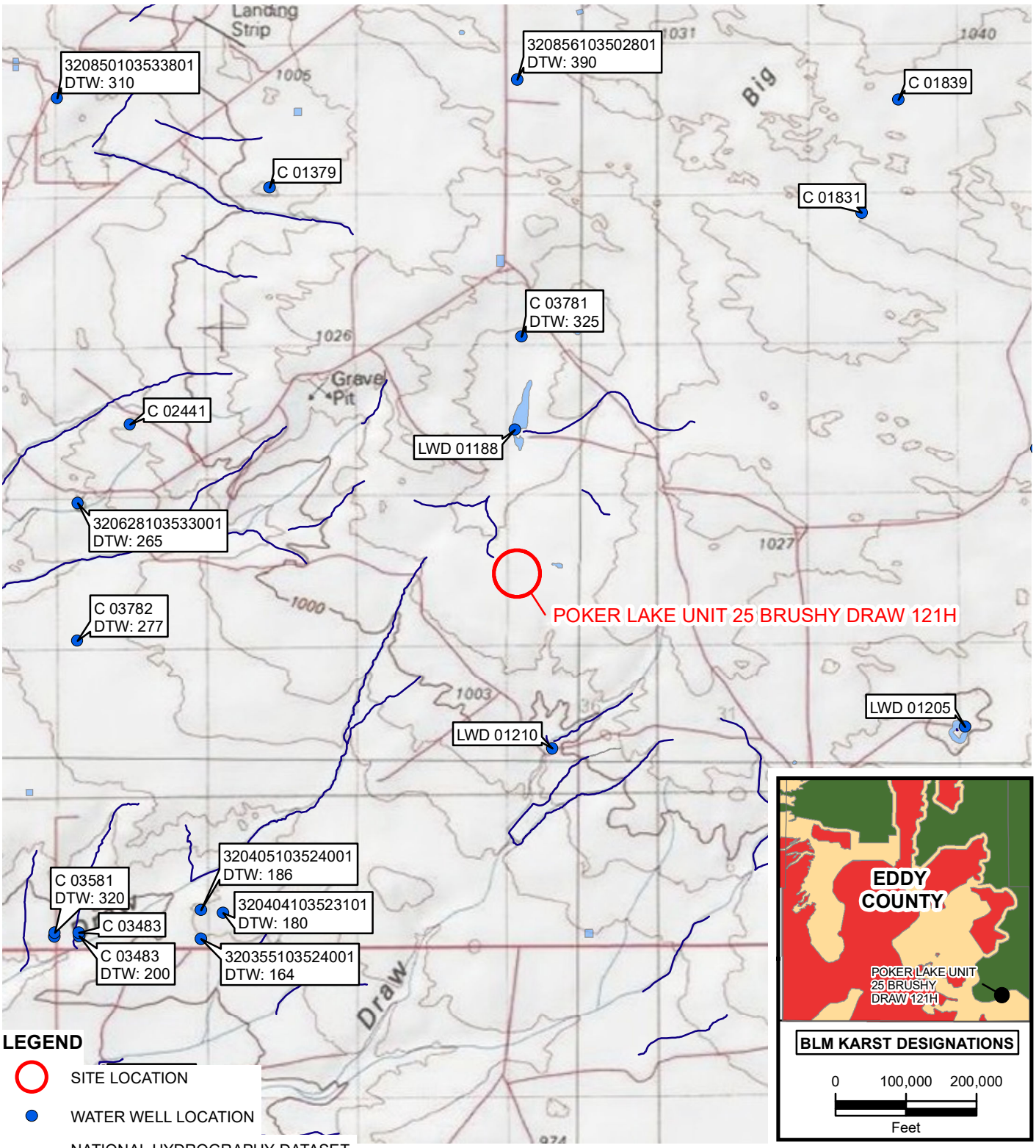
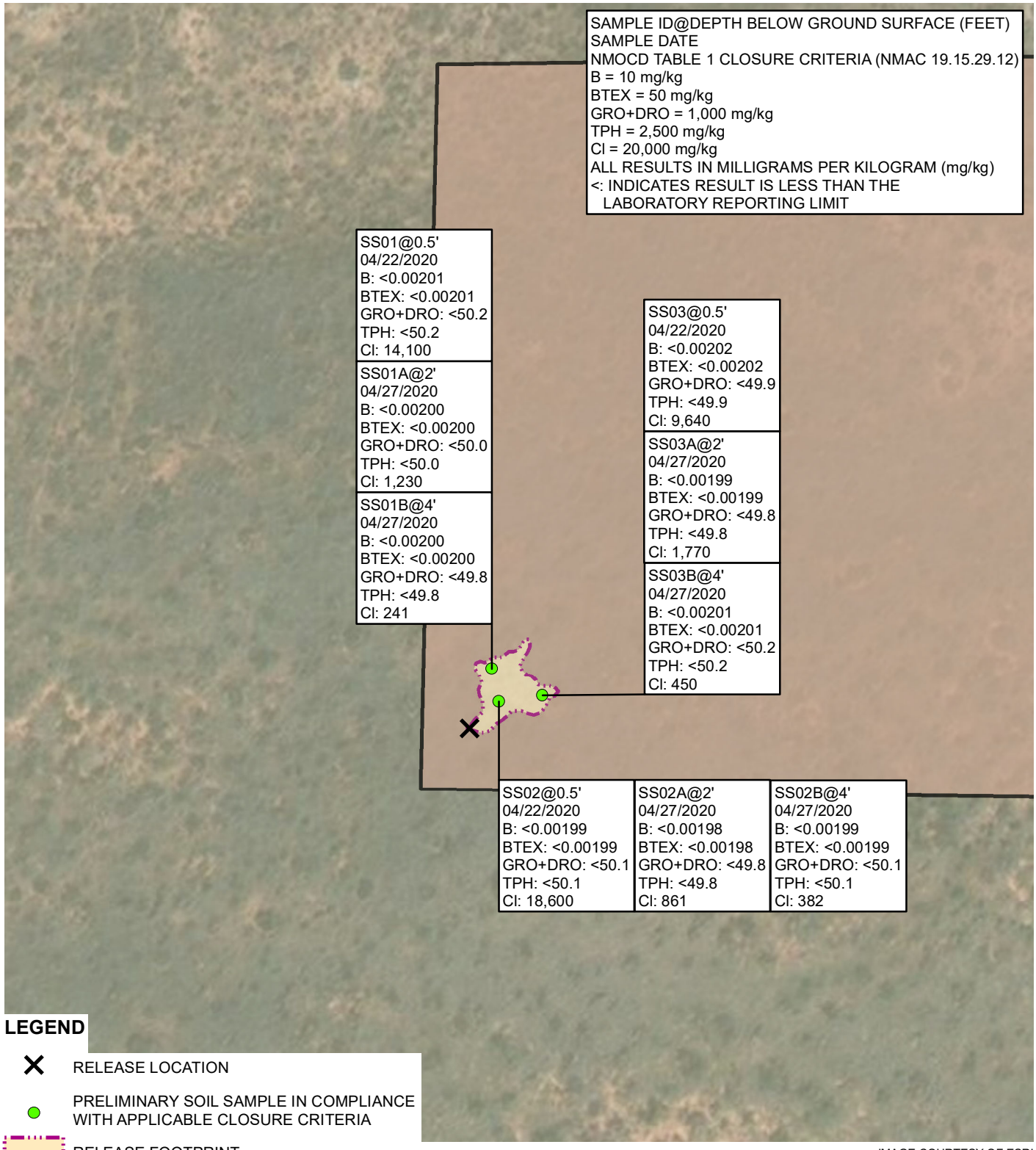


FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 25 BRUSHY DRAW 121H
UNIT L SEC 25 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920069_PLU 25 BRUSHY DRAW\012920069_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 NRM2011453506

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 25 BRUSHY DRAW 121H
UNIT L SEC 25 T25S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012920069_PLU 25 BRUSHY DRAW\012920069_FIG02_PRELIMINARY_2020.mxd

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

POKER LAKE UNIT 25 BRUSHY DRAW 121H
INCIDENT NUMBER NRM2011453506
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	4/22/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	14,100
SS01 A	2	04/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,230
SS01 B	4	04/27/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	241
SS02	0.5	4/22/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	18,600
SS02 A	2	04/27/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	861
SS02 B	4	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	382
SS03	0.5	4/22/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	9,640
SS03 B	2	04/27/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<49.8	<49.8	<49.8	<49.8	<49.8	1,770
SS03 A	4	04/27/2020	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.2	<50.2	<50.2	<50.2	<50.2	450

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

< - indicates result is below laboratory reporting limits

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

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ATTACHMENT 1: REFERENCED WELL LOGS

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03782 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

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

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

Agent: ATKINS ENGR ASSOC INC

Contact: CHRIS CORTEZ

Owner: BOPCO, L.P.

Contact: BRIAN PREGGER

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	555125	EXPL	2014-11-14	PMT	LOG	C 03782	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 03782 POD1		Artesian	4	3	3	28	25S	30E	604526	3551444	2/3 MILE SW OF HEDGEHOG ROAD

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 03782 POD1	4	3	3	28	25S	30E	604526	3551444

Driller License:	331	**Driller Company:**	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.		
Driller Name:					
Drill Start Date:	01/16/2015	**Drill Finish Date:**	01/17/2015	**Plug Date:**	
Log File Date:	02/19/2015	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	8.63	**Depth Well:**	805 feet	**Depth Water:**	277 feet

Water Bearing Stratifications:	Top	Bottom	Description
	260	320	Sandstone/Gravel/Conglomerate
	320	380	Sandstone/Gravel/Conglomerate
	380	410	Sandstone/Gravel/Conglomerate
	410	530	Shale/Mudstone/Siltstone
	530	590	Shale/Mudstone/Siltstone
	590	600	Shale/Mudstone/Siltstone
	600	630	Shale/Mudstone/Siltstone
	630	650	Shale/Mudstone/Siltstone
	650	700	Shale/Mudstone/Siltstone
	700	710	Shale/Mudstone/Siltstone
	710	760	Shale/Mudstone/Siltstone
	760	770	Shale/Mudstone/Siltstone
	770	780	Shale/Mudstone/Siltstone
	780	790	Shale/Mudstone/Siltstone
	790	805	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	270	805

National Water Information System: Web Interface

USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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

USGS 320628103533001 25S.30E.21.333424

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°06'28", Longitude 103°53'30" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: 288 feet
Land surface altitude: 3,207 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	1958-08-21	1998-01-28	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

---

Questions about sites/data?
Feedback on this web site

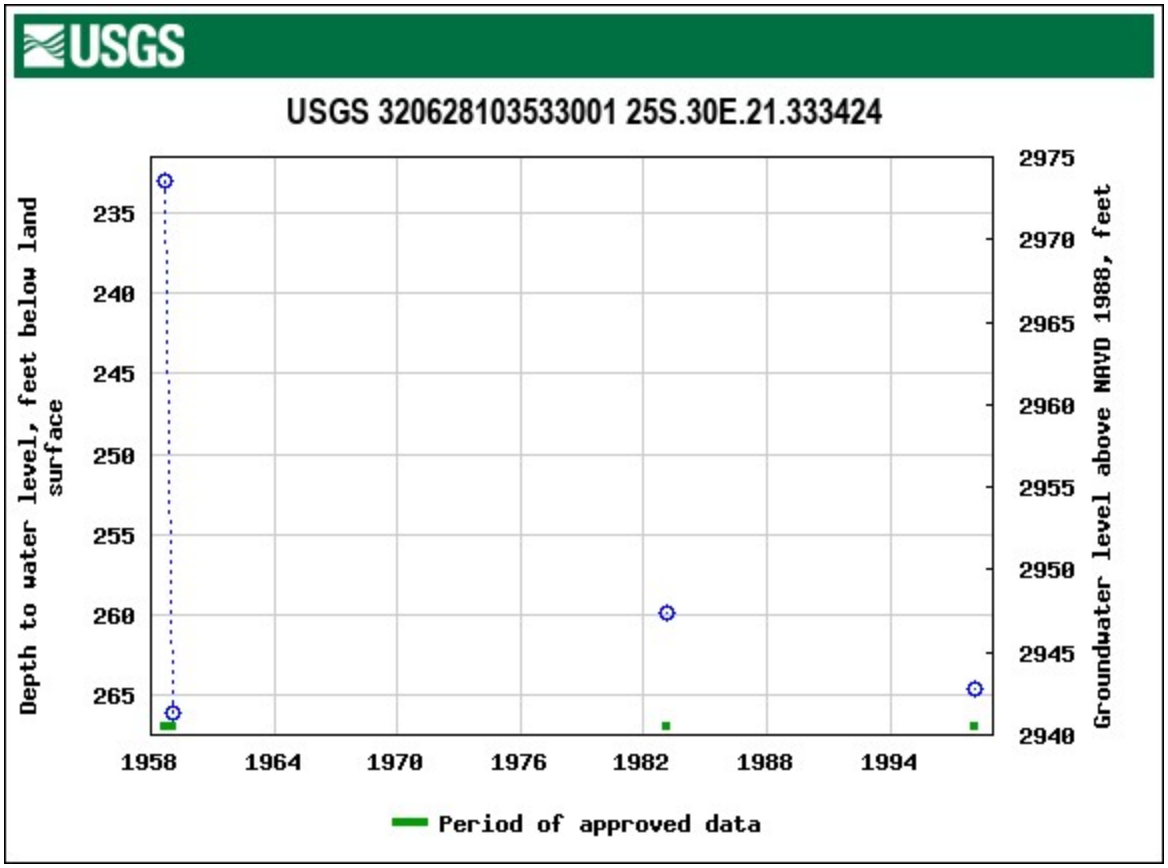
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

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=320628103533001

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-31 18:08:43 EDT
0.3 0.28 vaww02


USGS
USGS 320628103533001 25S.30E.21.333424
Depth to water level, feet below land surface
235
240
245
250
255
260
265
1958
1964
1970
1976
1982
1988
1994
2975
2970
2965
2960
2955
2950
2945
2940
Groundwater level above NAVD 1988, feet
Period of approved data

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03781 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

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

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

Agent: ATKINS ENGR ASSOC INC

Contact: CHRIS CORTEZ

Owner: BOPCO, L.P.

Contact: BRIAN PREGGER

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	555114	EXPL	2014-11-14	PMT	LOG	C 03781	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 03781 POD1		Artesian	3	3	3	13	25S	30E	609306	3554761	1/3 MILE W. OF BUCK JACKSON RD

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 03781 POD1	3	3	3	13	25S	30E	609306	3554761

Driller License:	331	**Driller Company:**	SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.		
Driller Name:					
Drill Start Date:	01/08/2015	**Drill Finish Date:**	01/10/2015	**Plug Date:**	
Log File Date:	02/19/2015	**PCW Rcv Date:**		**Source:**	Artesian
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	8.63	**Depth Well:**	720 feet	**Depth Water:**	325 feet

Water Bearing Stratifications:	Top	Bottom	Description
	200	370	Sandstone/Gravel/Conglomerate
	370	390	Sandstone/Gravel/Conglomerate
	390	410	Sandstone/Gravel/Conglomerate
	410	440	Sandstone/Gravel/Conglomerate
	440	460	Shale/Mudstone/Siltstone
	460	470	Shale/Mudstone/Siltstone
	470	490	Shale/Mudstone/Siltstone
	490	500	Shale/Mudstone/Siltstone
	500	510	Sandstone/Gravel/Conglomerate
	510	530	Shale/Mudstone/Siltstone
	530	660	Shale/Mudstone/Siltstone
	660	690	Shale/Mudstone/Siltstone
	690	700	Shale/Mudstone/Siltstone
	700	720	Shale/Mudstone/Siltstone

Casing Perforations:	Top	Bottom
	340	720

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03581 **Subbasin:** CUB **Cross Reference:** -

Primary Purpose: EXP EXPLORATION

Primary Status: PMT PERMIT

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

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

Owner: GREGORY ROCKHOUSE RANCH, INC.

Contact: M STAPLETON, LLC

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	515401	EXPL	2012-10-19	PMT	LOG	C 03581	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 03581 POD1		Shallow	4	4	4	05	26S	30E	604298	3548291	COTTON DRAW 162

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twns	Rng	X	Y
	C 03581 POD1	4	4	4	05	26S	30E	604298	3548291

Driller License: 1654 **Driller Company:** NOT WORKING FOR HIRE--SIRMAN DRILLING AND CONSTRUC
Driller Name:

Drill Start Date: 11/01/2012 **Drill Finish Date:** 11/09/2012 **Plug Date:**
Log File Date: 11/13/2012 **PCW Rcv Date:** **Source:** Shallow
Pump Type: **Pipe Discharge Size:** **Estimated Yield:** 55 GPM
Casing Size: 6.00 **Depth Well:** 800 feet **Depth Water:** 320 feet

Water Bearing Stratifications:

Top	Bottom	Description
225	335	Sandstone/Gravel/Conglomerate
690	710	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
360	400
680	760
760	800

Meter Number: 16571 **Meter Make:** MASTERMETER
Meter Serial Number: 8107621 **Meter Multiplier:** 100.0000
Number of Dials: 6 **Meter Type:** Diversion
Unit of Measure: Gallons **Return Flow Percent:**
Usage Multiplier: **Reading Frequency:**

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
04/01/2014	2014	259537	A	RPT		0	
07/01/2014	2014	278436	A	RPT		5.800	
10/01/2014	2014	296778	A	RPT		5.629	
12/31/2014	2014	313660	A	RPT		5.181	
02/01/2015	2015	318775	A	RPT		1.570	
03/02/2015	2015	323284	A	RPT		1.384	
04/01/2015	2015	328475	A	RPT		1.593	
04/30/2015	2015	335707	A	RPT		2.219	
05/31/2015	2015	342147	A	RPT		1.976	
08/01/2015	2015	352324	A	RPT		3.123	
08/31/2015	2015	358371	A	RPT		1.856	
10/01/2015	2015	364478	A	RPT		1.874	

**YTD Meter Amounts:	Year	Amount
	2014	16.610
	2015	15.595

8/31/20 4:11 PM POINT OF DIVERSION SUMMARY

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03483 **Subbasin:** C **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

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

Total Diversion: 3 **Cause/Case:** -

Owner: BYRON W (SHOT) PASCHAL

Owner: BUREAU OF LAND MANAGEMENT

Contact: STEVE DALY

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	588093	72121	2016-05-31	PMT	APR	C 03483 POD1	T		3	
get images	543409	COWNF	2014-03-17	CHG	PRC	C 03483	T	0	0	
get images	476565	EXPL	2011-04-15	PMT	LOG	C 03483	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 03483		Shallow	4	4	4	05	26S	30E	604296	3548251	.5 MI E. OF C-1361;PIPELINE RD
C 03483 POD2				3	3	04	26S	30E	604566	3548253	
C 03483 POD3			4	3	3	04	26S	30E	604558	3548291	

Source

Acres	Diversion	CU	Use	Priority	Source	Description
0	0		EXP		GW	

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	C 03483	4	4	4	05	26S	30E	604296	3548251

Driller License: 1509 **Driller Company:** BMS DRILLING COMPANY

Driller Name: BEAUREGARD, RICHARD

Drill Start Date: 06/03/2011 **Drill Finish Date:** 06/08/2011 **Plug Date:**

Log File Date: 07/14/2011 **PCW Rcv Date:** **Source:** Shallow

Pump Type: SUBMER **Pipe Discharge Size:** **Estimated Yield:** 35 GPM

Casing Size: 8.00 **Depth Well:** 700 feet **Depth Water:** 200 feet

Water Bearing Stratifications:

Top	Bottom	Description
200	255	Sandstone/Gravel/Conglomerate
285	320	Sandstone/Gravel/Conglomerate
320	360	Sandstone/Gravel/Conglomerate
510	650	Shale/Mudstone/Siltstone

Casing Perforations:

Top	Bottom
180	260
280	360
500	680

Meter Number: 14452 **Meter Make:** MASTERMETER

Meter Serial Number: 32530329 **Meter Multiplier:** 100.0000

Number of Dials: 6 **Meter Type:** Diversion

Unit of Measure: Gallons **Return Flow Percent:**

Usage Multiplier: **Reading Frequency:**

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
07/11/2011	2011	10	A	bd	WELL TO BE SET UP FOR COM SALE	0	
04/01/2014	2014	188668	A	RPT		0	
04/02/2014	2014	44195	A	RPT		0	
07/01/2014	2014	62284	A	RPT		5.551	
10/01/2014	2014	91448	A	RPT		8.950	
12/31/2014	2014	126199	A	RPT		10.665	
02/01/2015	2015	138888	A	RPT		3.894	
03/02/2015	2015	150578	A	RPT		3.588	
04/01/2015	2015	157715	A	RPT		2.190	
04/30/2015	2015	170037	A	RPT		3.781	
05/31/2015	2015	182144	A	RPT		3.716	
07/01/2015	2015	188338	A	RPT		1.901	
08/31/2015	2015	209416	A	RPT		6.469	
01/01/2016	2015	244328	A	mb		10.714	
02/01/2016	2016	245605	A	mb		0.392	
03/02/2016	2016	246331	A	mb		0.223	

04/01/2016	2016	246331	A	mb	0
05/01/2016	2016	248057	A	mb	0.530
06/01/2016	2016	262631	A	mb	4.473
07/01/2016	2016	271192	A	mb	2.627
08/01/2016	2016	273040	A	mb	0.567
09/01/2016	2016	283123	A	mb	3.094
10/01/2016	2016	290786	A	mb	2.352

**YTD Meter Amounts:	Year	Amount
	2011	0
	2014	25.166
	2015	36.253
	2016	14.258

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USGS 320405103524001 26S.30E.05.33441

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°04'05", Longitude 103°52'40" NAD27
Eddy County, New Mexico , Hydrologic Unit 13070001
Well depth: 770 feet
Land surface altitude: 3,159 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	1959-02-18	1983-02-15	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

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Title: NWIS Site Information for USA: Site Inventory
URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320405103524001

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-31 18:10:19 EDT
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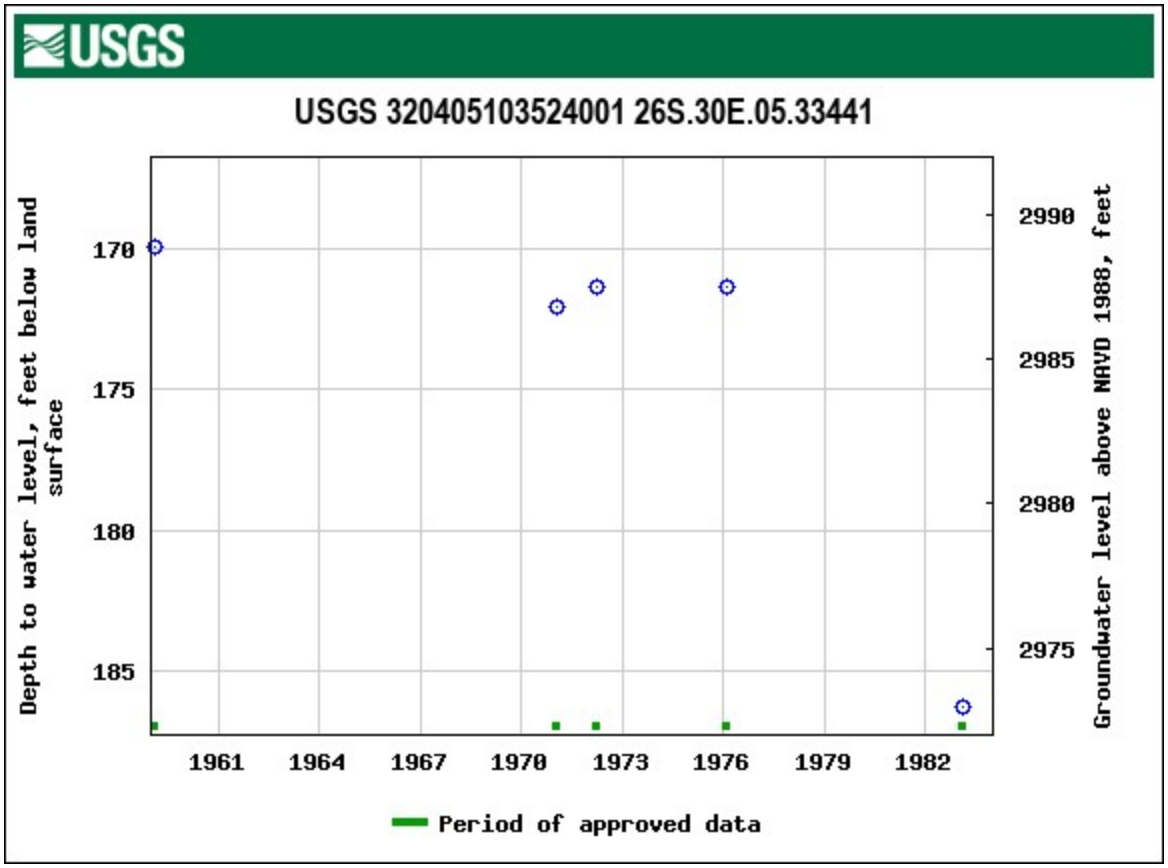
USGS
USGS 320405103524001 26S.30E.05.33441
Depth to water level, feet below land surface
170
175
180
185
2990
2985
2980
2975
Groundwater level above NAVD 1988, feet
1961
1964
1967
1970
1973
1976
1979
1982
Period of approved data

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USGS 320404103523101 26S.30E.05.343414

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°04'04", Longitude 103°52'31" NAD27
Eddy County, New Mexico , Hydrologic Unit 13070001
Well depth: 775 feet
Land surface altitude: 3,173 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	1958-08-18	1998-01-28	6
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

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URL: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=320404103523101

Page Contact Information: New Mexico Water Data Support Team
Page Last Modified: 2020-08-31 18:11:04 EDT
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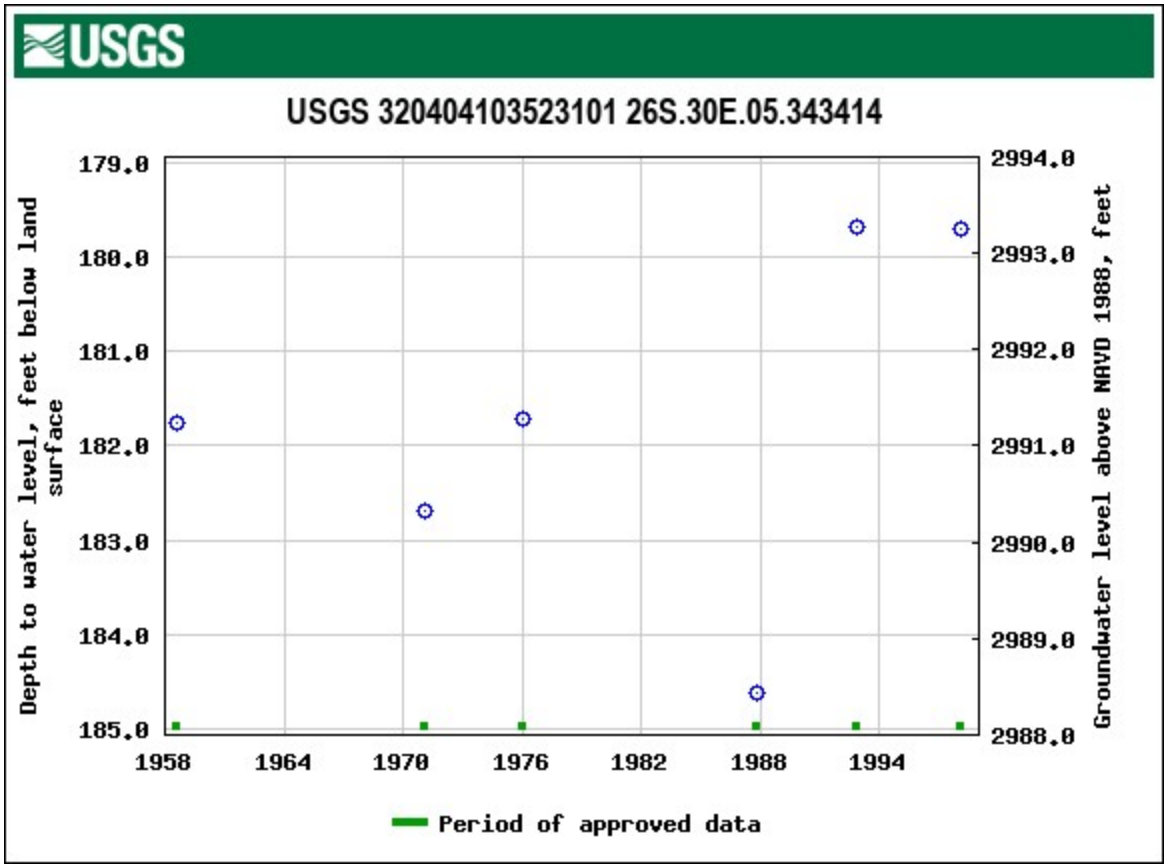
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USGS 320404103523101 26S.30E.05.343414
Depth to water level, feet below land surface
179.0
180.0
181.0
182.0
183.0
184.0
185.0
Groundwater level above NAVD 1988, feet
2994.0
2993.0
2992.0
2991.0
2990.0
2989.0
2988.0
1958
1964
1970
1976
1982
1988
1994
Period of approved data

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USGS 320355103524001 26S.30E.08.11421

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Well Site

DESCRIPTION:

Latitude 32°03'55", Longitude 103°52'40" NAD27
Eddy County, New Mexico , Hydrologic Unit 13070001
Well depth: 200 feet
Land surface altitude: 3,147 feet above NAVD88.
Well completed in "Santa Rosa Sandstone" (231SNRS) local aquifer

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Field groundwater-level measurements	1948-12-15	1959-02-18	2
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

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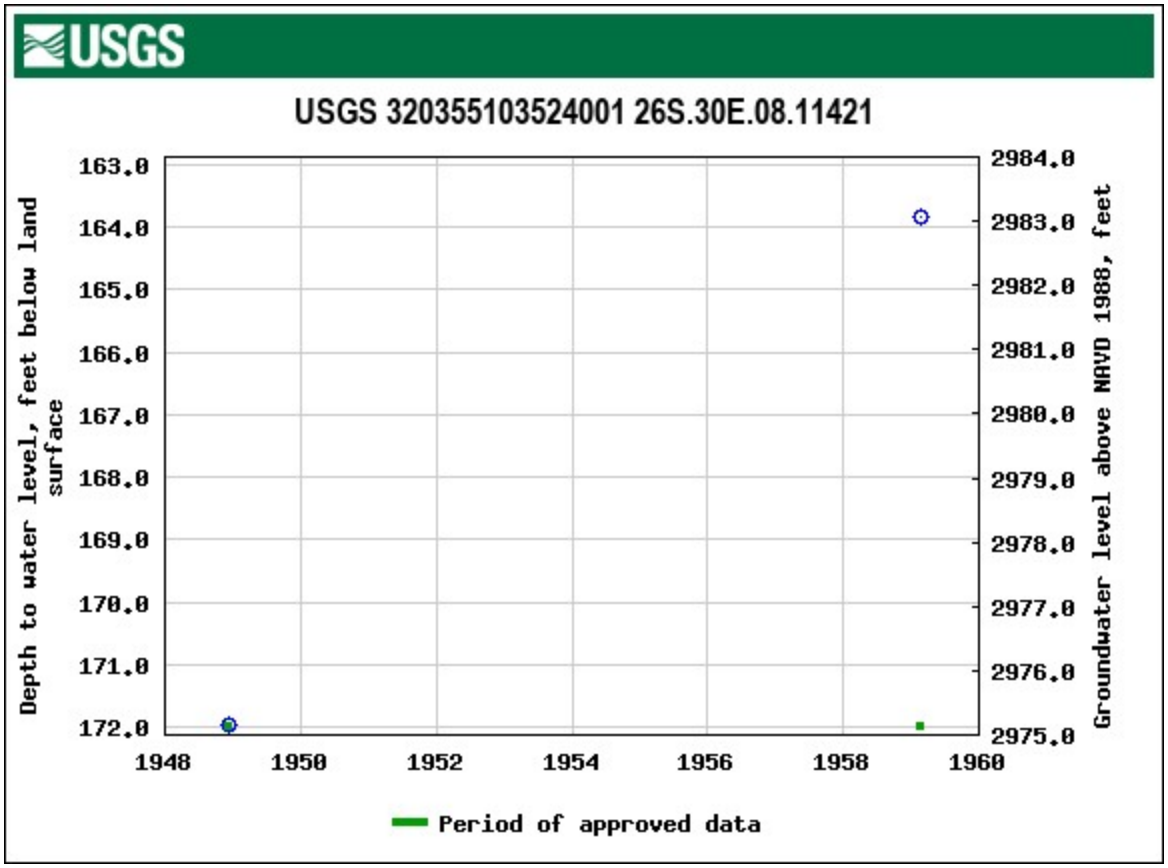
USGS
USGS 320355103524001 26S.30E.08.11421
Depth to water level, feet below land surface
163.0
164.0
165.0
166.0
167.0
168.0
169.0
170.0
171.0
172.0
Groundwater level above NAVD 1988, feet
2984.0
2983.0
2982.0
2981.0
2980.0
2979.0
2978.0
2977.0
2976.0
2975.0
1948
1950
1952
1954
1956
1958
1960
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USGS Water Resources

Data Category: Site Information | Geographic Area: United States | GO

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USGS 320850103533801 25S.30E.08.224444

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Well Site

DESCRIPTION:

Latitude 32°08'50", Longitude 103°53'38" NAD27
Eddy County, New Mexico , Hydrologic Unit 13060011
Well depth: not determined.
Land surface altitude: 3,232 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	1958-08-19	1958-08-19	1
Revisions	Unavailable (site:0) (timeseries:0)		

OPERATION:

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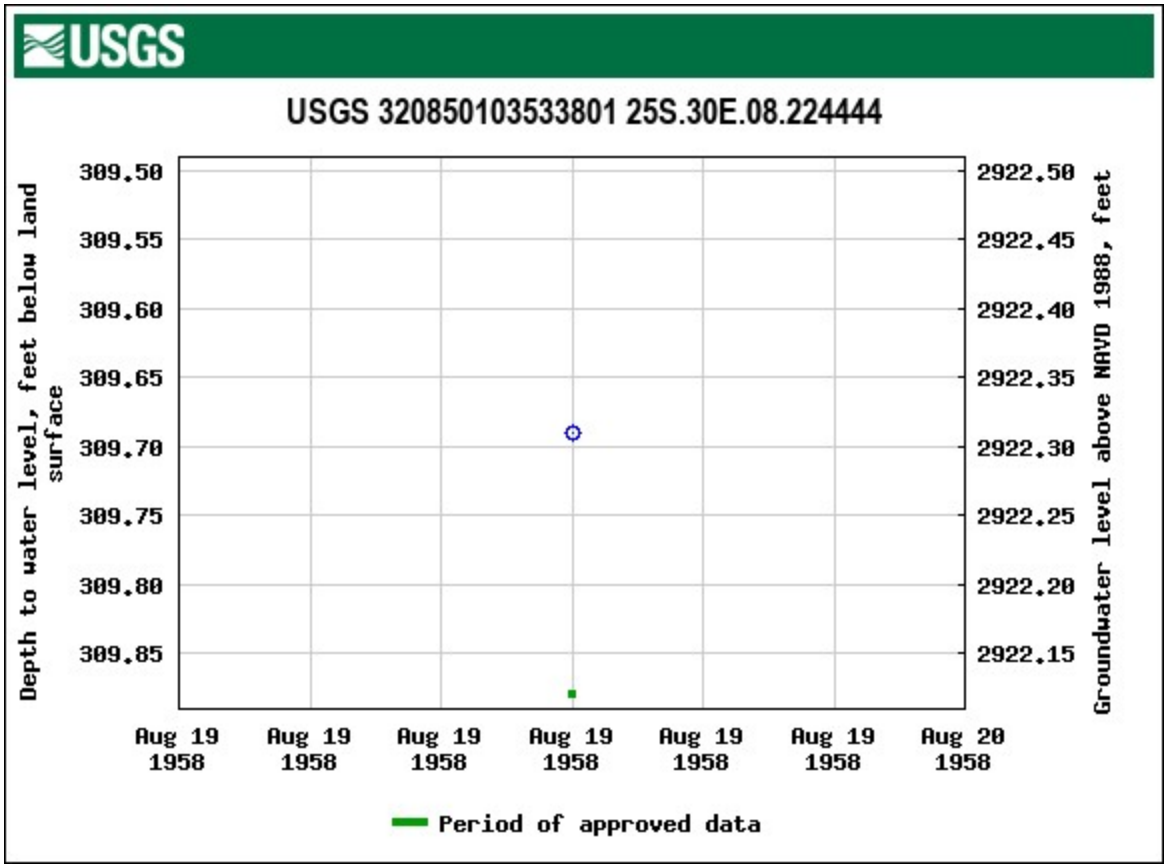
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USGS 320850103533801 25S.30E.08.224444
Depth to water level, feet below land surface
309.50
309.55
309.60
309.65
309.70
309.75
309.80
309.85
Groundwater level above NAVD 1988, feet
2922.50
2922.45
2922.40
2922.35
2922.30
2922.25
2922.20
2922.15
Aug 19 1958
Aug 19 1958
Aug 19 1958
Aug 19 1958
Aug 19 1958
Aug 19 1958
Aug 20 1958
Period of approved data

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USGS 320856103502801 25S.30E.12.113211

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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:

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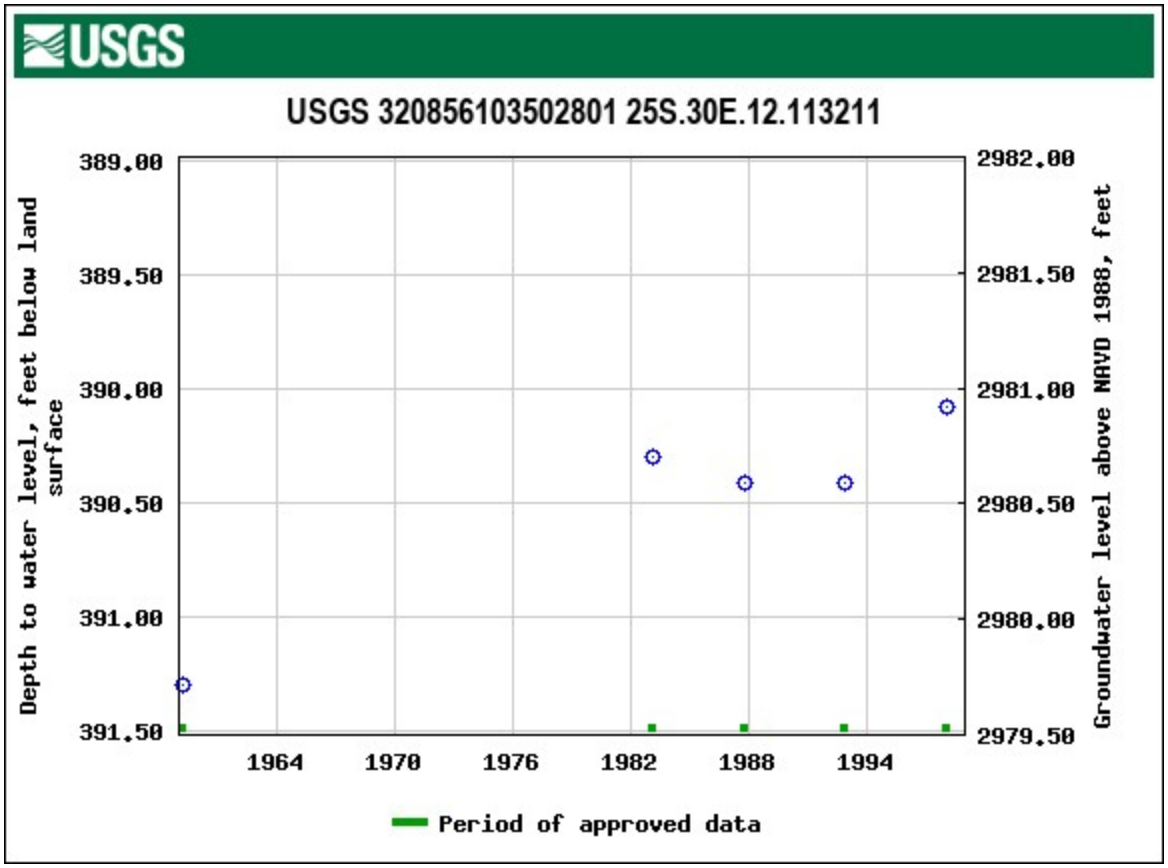
USGS
USGS 320856103502801 25S.30E.12.113211
Depth to water level, feet below land surface
389.00
389.50
390.00
390.50
391.00
391.50
Groundwater level above NAVD 1988, feet
2982.00
2981.50
2981.00
2980.50
2980.00
2979.50
1964
1970
1976
1982
1988
1994
Period of approved data

ATTACHMENT 2: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View of western side of pad.

Photograph 2: View of southwest corner of pad where release occurred.

ATTACHMENT 3: LITHOLOGIC / SOIL SAMPLING LOG

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

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BH or PH Name: PH01 (SS01A-B)	Date: 4-27-20
Site Name: PLU 25 BD 202H, 121H, 901H	
RP or Incident Number:	
LTE Job Number: 012920064	
Logged By: Travis Casey	Method: Excavator
Lat/Long: 32.100998/-103.841896	Field Screening: Chloride, PID CL/PID
Hole Diameter: N/A	Total Depth: 2'-4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	0-4' CALICHE Dry and Moist, tan, moderately consolidated, no stain, no odor
						1		
D	1,540	3.2	N	SS01A		2		
							CCHE	CALICHE Moist, tan, compact, no stain no odor
						3		
M	252	0.0	N	SS01B		4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

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

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BH or PH Name: PH02 (SS02A-B) | Date: 4-27-20

Site Name: PLU 25 BD 202H, 121H, 901H

RP or Incident Number:

LTE Job Number: 012920069

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Travis Casey | Method: Excavator

Lat/Long: 32.160935/-103.841881 | Field Screening: Chloride, PID CL/PID | Hole Diameter: N/A | Total Depth: 2'-4'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CCHE	0-4' CALICHE Dry + Moist, tan, moderately consolidated, no stain, no odor
D	946.4	0.0	N	SS02A		1		
						2	CCHE	CALICHE Moist, tan, compact, No Stain No odor
M	420	0.0	N	SS02B		3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		

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

A proud member of WSP

Compliance · Engineering · Remediation

BH or PH Name: PH03 (SS03 A-B)	Date: 4-27-20
Site Name: PLU 25 BD 202H, 121H, 901H	
RP or Incident Number:	
LTE Job Number: 012920069	
Logged By: Travis Casey	Method: Excavator
Lat/Long: 32.100946/-103.841780	Field Screening: Chloride, PID CL/PID
Hole Diameter: N/A	Total Depth: 2'-4'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0	CLHE	0-4' CALICHE Dry + Moist, tan Moderately Consolidated, No Stain, No odor
D	1,663.2	0.0	N	SS03A		2	CLHE	CALICHE Moist, tan, Compact, No Stain No odor
M	582.4	0.0	N	SS03B		4		

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS

Analytical Report 659618

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 25 BD

012920069

04.27.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

04.27.2020

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

Reference: XENCO Report No(s): **659618**
PLU 25 BD
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) 659618. 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. 659618 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	04.22.2020 15:37	0 - 0.3 ft	659618-001
SS02	S	04.22.2020 15:41	0 - 0.3 ft	659618-002
SS03	S	04.22.2020 15:45	0 - 0.3 ft	659618-003

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD

Project ID: *012920069*
Work Order Number(s): *659618*

Report Date: *04.27.2020*
Date Received: *04.23.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3124031 Chloride by EPA 300

Lab Sample ID 659681-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 659618-001, -002, -003.

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

Certificate of Analysis Summary 659618

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD

Project Id: 012920069
Contact: Dan Moir
Project Location:

Date Received in Lab: Thu 04.23.2020 09:12
Report Date: 04.27.2020 12:01
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	659618-001		659618-002		659618-003					
	Field Id:	SS01		SS02		SS03					
	Depth:	0-0.3 ft		0-0.3 ft		0-0.3 ft					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	04.22.2020 15:37		04.22.2020 15:41		04.22.2020 15:45					
BTEX by EPA 8021B	***Extracted:***	04.23.2020 16:00		04.23.2020 16:00		04.23.2020 16:00					
	Analyzed:	04.23.2020 18:42		04.23.2020 19:02		04.23.2020 19:22					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00403	0.00403				
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	04.23.2020 15:00		04.23.2020 15:00		04.23.2020 15:00					
	Analyzed:	04.23.2020 15:30		04.23.2020 15:52		04.23.2020 15:58					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		14100 X	499	18600	505	9640	501				
TPH by SW8015 Mod	***Extracted:***	04.23.2020 17:00		04.23.2020 17:00		04.23.2020 17:00					
	Analyzed:	04.24.2020 15:04		04.23.2020 20:00		04.23.2020 21:02					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.1	50.1	<49.9	49.9				
Diesel Range Organics (DRO)		<50.2	50.2	<50.1	50.1	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.1	50.1	<49.9	49.9				
Total GRO-DRO		<50.2	50.2	<50.1	50.1	<49.9	49.9				
Total TPH		<50.2	50.2	<50.1	50.1	<49.9	49.9				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-001	Date Collected:	04.22.2020 15:37	Sample Depth:	0 - 0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 15:00	Basis:	Wet Weight
Seq Number:	3124031				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14100**	499	mg/kg	04.23.2020 15:30	X	50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.23.2020 17:00	Basis:	Wet Weight
Seq Number:	3124187				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.24.2020 15:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.24.2020 15:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.24.2020 15:04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.24.2020 15:04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.24.2020 15:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	04.24.2020 15:04	
o-Terphenyl	84-15-1	95	%	70-135	04.24.2020 15:04	

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-001	Date Collected:	04.22.2020 15:37	Sample Depth:	0 - 0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 16:00	Basis:	Wet Weight
Seq Number:	3124024				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.23.2020 18:42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.23.2020 18:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.23.2020 18:42	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.23.2020 18:42	

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-002	Date Collected:	04.22.2020 15:41	Sample Depth:	0 - 0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 15:00	Basis:	Wet Weight
Seq Number:	3124031				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**18600**	505	mg/kg	04.23.2020 15:52		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.23.2020 17:00	Basis:	Wet Weight
Seq Number:	3124046				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.23.2020 20:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.23.2020 20:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.23.2020 20:00	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.23.2020 20:00	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.23.2020 20:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	04.23.2020 20:00	
o-Terphenyl	84-15-1	128	%	70-135	04.23.2020 20:00	

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-002	Date Collected:	04.22.2020 15:41	Sample Depth:	0 - 0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 16:00	Basis:	Wet Weight
Seq Number:	3124024				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.23.2020 19:02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.23.2020 19:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.23.2020 19:02	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.23.2020 19:02	

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-003	Date Collected:	04.22.2020 15:45	Sample Depth:	0 - 0.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 15:00	Basis:	Wet Weight
Seq Number:	3124031				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9640**	501	mg/kg	04.23.2020 15:58		50

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.23.2020 17:00	Basis:	Wet Weight
Seq Number:	3124046				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.23.2020 21:02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.23.2020 21:02	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.23.2020 21:02	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.23.2020 21:02	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.23.2020 21:02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.23.2020 21:02	
o-Terphenyl	84-15-1	115	%	70-135	04.23.2020 21:02	

Certificate of Analytical Results 659618

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	04.23.2020 09:12
Lab Sample Id:	659618-003	Date Collected:	04.22.2020 15:45	Sample Depth:	0 - 0.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.23.2020 16:00	Basis:	Wet Weight
Seq Number:	3124024				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.23.2020 19:22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.23.2020 19:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.23.2020 19:22	
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.23.2020 19:22	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 659618

LT Environmental, Inc.

PLU 25 BD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124031 — Matrix: Solid — Date Prep: 04.23.2020
MB Sample Id: 7701931-1-BLK — LCS Sample Id: 7701931-1-BKS — LCSD Sample Id: 7701931-1-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	254	102	256	102	90-110	1	20	mg/kg	04.23.2020 15:19	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124031 — Matrix: Soil — Date Prep: 04.23.2020
Parent Sample Id: 659618-001 — MS Sample Id: 659618-001 S — MSD Sample Id: 659618-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	14100	250	14400	120	14400	120	90-110	0	20	mg/kg	04.23.2020 15:41	X

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124031 — Matrix: Soil — Date Prep: 04.23.2020
Parent Sample Id: 659681-001 — MS Sample Id: 659681-001 S — MSD Sample Id: 659681-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	287	200	469	91	469	91	90-110	0	20	mg/kg	04.23.2020 16:58	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124046 — Matrix: Solid — Date Prep: 04.23.2020
MB Sample Id: 7701997-1-BLK — LCS Sample Id: 7701997-1-BKS — LCSD Sample Id: 7701997-1-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	838	84	889	89	70-135	6	35	mg/kg	04.23.2020 19:20	
Diesel Range Organics (DRO)	<50.0	1000	925	93	978	98	70-135	6	35	mg/kg	04.23.2020 19:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		107		131		70-135	%	04.23.2020 19:20
o-Terphenyl	108		106		118		70-135	%	04.23.2020 19:20

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124187 — Matrix: Solid — Date Prep: 04.23.2020
MB Sample Id: 7701983-1-BLK — LCS Sample Id: 7701983-1-BKS — LCSD Sample Id: 7701983-1-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	876	88	723	72	70-135	19	35	mg/kg	04.24.2020 20:30	
Diesel Range Organics (DRO)	<50.0	1000	985	99	785	79	70-135	23	35	mg/kg	04.24.2020 20:30	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		116		94		70-135	%	04.24.2020 20:30
o-Terphenyl	120		117		93		70-135	%	04.24.2020 20:30

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 659618

LT Environmental, Inc.

PLU 25 BD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124046 — Matrix: Solid — Date Prep: 04.23.2020
MB Sample Id: 7701997-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.23.2020 18:59	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124187 — Matrix: Solid — Date Prep: 04.23.2020
MB Sample Id: 7701983-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.24.2020 14:03	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124046 — Matrix: Soil — Date Prep: 04.23.2020
Parent Sample Id: 659618-002 — MS Sample Id: 659618-002 S — MSD Sample Id: 659618-002 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)	<50.0	1000	813	81	1050	105	70-135	25	35	mg/kg	04.23.2020 20:21	
Diesel Range Organics (DRO)	<50.0	1000	879	88	1200	120	70-135	31	35	mg/kg	04.23.2020 20:21	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		134		70-135	%	04.23.2020 20:21
o-Terphenyl	110		125		70-135	%	04.23.2020 20:21

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124187 — Matrix: Soil — Date Prep: 04.23.2020
Parent Sample Id: 659618-001 — MS Sample Id: 659618-001 S — MSD Sample Id: 659618-001 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)	<50.1	1000	985	99	810	81	70-135	19	35	mg/kg	04.24.2020 20:50	
Diesel Range Organics (DRO)	<50.1	1000	1110	111	871	87	70-135	24	35	mg/kg	04.24.2020 20:50	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		113		70-135	%	04.24.2020 20:50
o-Terphenyl	122		97		70-135	%	04.24.2020 20:50

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 659618

LT Environmental, Inc.

PLU 25 BD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124024 Matrix: Solid Date Prep: 04.23.2020
MB Sample Id: 7701922-1-BLK LCS Sample Id: 7701922-1-BKS LCSD Sample Id: 7701922-1-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	0.106	106	0.110	110	70-130	4	35	mg/kg	04.23.2020 15:38	
Toluene	<0.00200	0.100	0.101	101	0.105	105	70-130	4	35	mg/kg	04.23.2020 15:38	
Ethylbenzene	<0.00200	0.100	0.0949	95	0.0980	98	71-129	3	35	mg/kg	04.23.2020 15:38	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.203	102	70-135	3	35	mg/kg	04.23.2020 15:38	
o-Xylene	<0.00200	0.100	0.0996	100	0.102	102	71-133	2	35	mg/kg	04.23.2020 15:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		103		106		70-130	%	04.23.2020 15:38
4-Bromofluorobenzene	98		93		93		70-130	%	04.23.2020 15:38

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124024 Matrix: Soil Date Prep: 04.23.2020
Parent Sample Id: 659586-001 MS Sample Id: 659586-001 S MSD Sample Id: 659586-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.117	117	0.114	114	70-130	3	35	mg/kg	04.23.2020 16:19	
Toluene	<0.00200	0.100	0.110	110	0.109	109	70-130	1	35	mg/kg	04.23.2020 16:19	
Ethylbenzene	<0.00200	0.100	0.105	105	0.102	102	71-129	3	35	mg/kg	04.23.2020 16:19	
m,p-Xylenes	<0.00401	0.200	0.216	108	0.210	105	70-135	3	35	mg/kg	04.23.2020 16:19	
o-Xylene	<0.00200	0.100	0.108	108	0.105	105	71-133	3	35	mg/kg	04.23.2020 16:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		104		70-130	%	04.23.2020 16:19
4-Bromofluorobenzene	93		94		70-130	%	04.23.2020 16:19

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Chain of Custody

Work Order No: 699618

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A Street	Address:	522 W. Mermod St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	(432) 236-3849	Email:	Jhill@ltenv.com, dmoir@ltenv.com

Work Order Comments

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

Project Name:	PLU 25 BD	Turn Around	
Project Number:	01292006G	Routine ☐	
P.O. Number:	2/5/20 Spud date	Rush: 48 hr	
Sampler's Name:	Jeremy Hill	Due Date: 4/27/20	

SAMPLE RECEIPT				
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No	
Temperature (°C):	1.0	Thermometer ID		
Received Intact:	(Yes) No		TNM007	
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)	Sample Comments
SS01	S	4/17/20	1537	0-0.3'	1	X	X	X	discrete
SS02	S	↓	1541	0-0.3'	1	X	X	X	↓
SS03	S	↓	1545	0-0.3'	1	X	X	X	↓

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
		4/23/20 6:00	2		4/23/20 09:12
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.23.2020 09.12.00 AM

Work Order #: 659618

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.23.2020

Checklist reviewed by: Jessica Kramer Date: 04.23.2020

Jessica Kramer

Analytical Report 659876

for

LT Environmental, Inc.

Project Manager: Tacoma Morrissey

PLU 25 BD

012920069

05.01.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

05.01.2020

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

Reference: XENCO Report No(s): **659876**
PLU 25 BD
Project Address:

Tacoma Morrissey:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 659876. 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. 659876 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 Manager

A Small Business and Minority Company

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

Sample Cross Reference 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01 A	S	04.27.2020 11:31	2 ft	659876-001
SS01 B	S	04.27.2020 11:39	4 ft	659876-002
SS02 A	S	04.27.2020 11:48	2 ft	659876-003
SS02 B	S	04.27.2020 12:04	4 ft	659876-004
SS03 B	S	04.27.2020 12:07	2 ft	659876-005
SS03 A	S	04.27.2020 12:11	4 ft	659876-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 25 BD

Project ID: *012920069*
Work Order Number(s): *659876*

Report Date: *05.01.2020*
Date Received: *04.27.2020*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 659876

LT Environmental, Inc., Arvada, CO

Project Name: PLU 25 BD

Project Id: 012920069
Contact: Tacoma Morrissey
Project Location:

Date Received in Lab: Mon 04.27.2020 15:00
Report Date: 05.01.2020 15:13
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	659876-001		659876-002		659876-003		659876-004		659876-005		659876-006	
	Field Id:	SS01 A		SS01 B		SS02 A		SS02 B		SS03 B		SS03 A	
	Depth:	2- ft		4- ft		2- ft		4- ft		2- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.27.2020 11:31		04.27.2020 11:39		04.27.2020 11:48		04.27.2020 12:04		04.27.2020 12:07		04.27.2020 12:11	
BTEX by EPA 8021B	*Extracted:*	04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00	
	Analyzed:	04.27.2020 18:28		04.27.2020 18:49		04.27.2020 19:11		04.27.2020 19:32		04.27.2020 19:53		04.27.2020 20:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	<0.00396	0.00396	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00		04.27.2020 16:00	
	Analyzed:	04.27.2020 16:37		04.27.2020 16:54		04.27.2020 16:59		04.27.2020 17:05		04.27.2020 17:10		04.27.2020 17:27	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1230	99.4	241	10.0	861	9.98	382	9.98	450	101	1770	99.6
TPH by SW8015 Mod	*Extracted:*	04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00		04.27.2020 17:00	
	Analyzed:	04.27.2020 17:42		04.27.2020 18:03		04.27.2020 18:43		04.27.2020 17:42		04.27.2020 18:03		04.27.2020 18:43	
	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	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.2	50.2	<49.8	49.8
Diesel Range Organics (DRO)		<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.2	50.2	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.2	50.2	<49.8	49.8
Total GRO-DRO		<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.2	50.2	<49.8	49.8
Total TPH		<50.0	50.0	<49.8	49.8	<49.8	49.8	<50.1	50.1	<50.2	50.2	<49.8	49.8

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-001	Date Collected:	04.27.2020 11:31	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1230**	99.4	mg/kg	04.27.2020 16:37		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.27.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.27.2020 17:42	
o-Terphenyl	84-15-1	104	%	70-135	04.27.2020 17:42	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-001	Date Collected:	04.27.2020 11:31	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.27.2020 18:28	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.27.2020 18:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.27.2020 18:28	
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.27.2020 18:28	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-002	Date Collected:	04.27.2020 11:39	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**241**	10.0	mg/kg	04.27.2020 16:54		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.2020 18:03	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 18:03	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS01 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-002	Date Collected:	04.27.2020 11:39	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.27.2020 18:49	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.27.2020 18:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.27.2020 18:49	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.27.2020 18:49	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-003	Date Collected:	04.27.2020 11:48	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**861**	9.98	mg/kg	04.27.2020 16:59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.27.2020 18:43	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 18:43	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-003	Date Collected:	04.27.2020 11:48	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.27.2020 19:11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.27.2020 19:11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	04.27.2020 19:11	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.27.2020 19:11	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-004	Date Collected:	04.27.2020 12:04	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**382**	9.98	mg/kg	04.27.2020 17:05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.27.2020 17:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	04.27.2020 17:42	
o-Terphenyl	84-15-1	101	%	70-135	04.27.2020 17:42	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS02 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-004	Date Collected:	04.27.2020 12:04	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.27.2020 19:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.27.2020 19:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	04.27.2020 19:32	
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.27.2020 19:32	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-005	Date Collected:	04.27.2020 12:07	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**450**	101	mg/kg	04.27.2020 17:10		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	04.27.2020 18:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.27.2020 18:03	
o-Terphenyl	84-15-1	109	%	70-135	04.27.2020 18:03	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03 B**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-005	Date Collected:	04.27.2020 12:07	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.27.2020 19:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.27.2020 19:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	04.27.2020 19:53	
4-Bromofluorobenzene	460-00-4	106	%	70-130	04.27.2020 19:53	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-006	Date Collected:	04.27.2020 12:11	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124306				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1770**	99.6	mg/kg	04.27.2020 17:27		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.27.2020 17:00	Basis:	Wet Weight
Seq Number:	3124331				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	04.27.2020 18:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.27.2020 18:43	
o-Terphenyl	84-15-1	115	%	70-135	04.27.2020 18:43	

Certificate of Analytical Results 659876

LT Environmental, Inc., Arvada, CO

PLU 25 BD

Sample Id:	**SS03 A**	Matrix:	Soil	Date Received:	04.27.2020 15:00
Lab Sample Id:	659876-006	Date Collected:	04.27.2020 12:11	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.27.2020 16:00	Basis:	Wet Weight
Seq Number:	3124300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.27.2020 20:15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.27.2020 20:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	115	%	70-130	04.27.2020 20:15	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.27.2020 20:15	

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. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 659876

LT Environmental, Inc.

PLU 25 BD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702149-1-BLK — LCS Sample Id: 7702149-1-BKS — LCSD Sample Id: 7702149-1-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	250	100	250	100	90-110	0	20	mg/kg	04.27.2020 16:26	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659876-001 — MS Sample Id: 659876-001 S — MSD Sample Id: 659876-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1230	201	1410	90	1420	95	90-110	1	20	mg/kg	04.27.2020 16:43	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3124306 — Matrix: Soil — Date Prep: 04.27.2020
Parent Sample Id: 659890-002 — MS Sample Id: 659890-002 S — MSD Sample Id: 659890-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	330	199	548	110	548	110	90-110	0	20	mg/kg	04.27.2020 17:59	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124321 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702167-1-BLK — LCS Sample Id: 7702167-1-BKS — LCSD Sample Id: 7702167-1-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	858	86	967	97	70-135	12	35	mg/kg	04.27.2020 13:00	
Diesel Range Organics (DRO)	<50.0	1000	958	96	1090	109	70-135	13	35	mg/kg	04.27.2020 13:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		127		132		70-135	%	04.27.2020 13:00
o-Terphenyl	131		127		122		70-135	%	04.27.2020 13:00

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3124331 — Matrix: Solid — Date Prep: 04.27.2020
MB Sample Id: 7702173-1-BLK — LCS Sample Id: 7702173-1-BKS — LCSD Sample Id: 7702173-1-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	914	91	898	90	70-135	2	35	mg/kg	04.27.2020 14:22	
Diesel Range Organics (DRO)	<50.0	1000	1020	102	998	100	70-135	2	35	mg/kg	04.27.2020 14:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		130		131		70-135	%	04.27.2020 14:22
o-Terphenyl	91		116		132		70-135	%	04.27.2020 14:22

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 659876

LT Environmental, Inc.

PLU 25 BD

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3124321 | Matrix: Solid | Date Prep: 04.27.2020
MB Sample Id: 7702167-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3124331 | Matrix: Solid | Date Prep: 04.27.2020
MB Sample Id: 7702173-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.27.2020 12:40	

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3124321 | Matrix: Soil | Date Prep: 04.27.2020
Parent Sample Id: 659819-001 | MS Sample Id: 659819-001 S | MSD Sample Id: 659819-001 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)	<50.3	1010	935	93	935	94	70-135	0	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	1060	105	1060	106	70-135	0	35	mg/kg	04.27.2020 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	04.27.2020 14:01
o-Terphenyl	115		114		70-135	%	04.27.2020 14:01

Analytical Method: TPH by SW8015 Mod | Prep Method: SW8015P
Seq Number: 3124331 | Matrix: Soil | Date Prep: 04.27.2020
Parent Sample Id: 659819-002 | MS Sample Id: 659819-002 S | MSD Sample Id: 659819-002 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	812	80	864	86	70-135	6	35	mg/kg	04.27.2020 14:01	
Diesel Range Organics (DRO)	<50.3	1010	877	87	971	97	70-135	10	35	mg/kg	04.27.2020 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		105		70-135	%	04.27.2020 14:01
o-Terphenyl	102		109		70-135	%	04.27.2020 14:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference 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 659876

LT Environmental, Inc.

PLU 25 BD

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124300 Matrix: Solid Date Prep: 04.27.2020
MB Sample Id: 7702088-1-BLK LCS Sample Id: 7702088-1-BKS LCSD Sample Id: 7702088-1-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	0.124	124	70-130	1	35	mg/kg	04.27.2020 10:59	
Toluene	<0.00200	0.100	0.109	109	0.110	110	70-130	1	35	mg/kg	04.27.2020 10:59	
Ethylbenzene	<0.00200	0.100	0.101	101	0.102	102	71-129	1	35	mg/kg	04.27.2020 10:59	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.196	98	70-135	0	35	mg/kg	04.27.2020 10:59	
o-Xylene	<0.00200	0.100	0.102	102	0.103	103	71-133	1	35	mg/kg	04.27.2020 10:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	114		108		111		70-130	%	04.27.2020 10:59
4-Bromofluorobenzene	102		97		98		70-130	%	04.27.2020 10:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3124300 Matrix: Soil Date Prep: 04.27.2020
Parent Sample Id: 659819-001 MS Sample Id: 659819-001 S MSD Sample Id: 659819-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0990	0.121	122	0.112	113	70-130	8	35	mg/kg	04.27.2020 11:41	
Toluene	<0.00198	0.0990	0.118	119	0.0994	100	70-130	17	35	mg/kg	04.27.2020 11:41	
Ethylbenzene	<0.00198	0.0990	0.112	113	0.0914	92	71-129	20	35	mg/kg	04.27.2020 11:41	
m,p-Xylenes	<0.00396	0.198	0.218	110	0.177	89	70-135	21	35	mg/kg	04.27.2020 11:41	
o-Xylene	<0.00198	0.0990	0.110	111	0.0922	93	71-133	18	35	mg/kg	04.27.2020 11:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		108		70-130	%	04.27.2020 11:41
4-Bromofluorobenzene	99		95		70-130	%	04.27.2020 11:41

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Chain of Custody

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: 598760

www.xenco.com Page 1 of 1

Project Manager:	Tacoma Morrissey	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO Energy
Address:	3300 North A St. Bldg 1, Unit 222	Address:	3104 E Greene St.
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM
Phone:	(432) 704-5178	Email:	tmorrissey@ltenv.com tcasey@ltenv.com ab

Work Order Comments

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

Project Name:	PLU 25 BD	Turn Around	
Project Number:	012920069	Routine	☐
P.O. Number:	2/5/20 spill Date	Rush:	24hr
Sampler's Name:	Travis Casey	Due Date:	4-28-20

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	2.2	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:	6	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
SS01A	S	4-27-20	1131	2'	1	X	X	X
SS01B			1139	4'	1	X	X	X
SS02A			1148	2'	1	X	X	X
SS02B			1204	4'	1	X	X	X
SS03A			1207	2'	1	X	X	X
SS03B			1211	4'	1	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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Travis Casey		4/27/20 15:00	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.27.2020 03.00.00 PM

Work Order #: 659876

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 Custody Seals intact on sample bottles?	**Yes**	
#6*Custody Seals Signed and dated?	**Yes**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	Samples revceived in bulk containers.
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**No**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.27.2020

Checklist reviewed by: Jessica Kramer Date: 04.28.2020

Jessica Kramer

State of New Mexico
Oil Conservation Division

Incident ID	NRM2011453506
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: [signature] Date: 08/31/2020

email: Kyle_Littrell@xtoenergy.com Telephone:

OCD Only

Received by: Robert Hamlet Date: 3/1/2021

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: Robert Hamlet Date: 3/1/2021

Printed Name: Robert Hamlet Title: Environmental Speicalist - Advanced

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 10188

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	5380	10188	C-141

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NRM2011453506 PLU 25 BD 121H, thank you. This closure is approved.