

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	NRM2016049766
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.193903 Longitude -103.918088
(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 442/443 SWD Battery	Site Type Tank Battery
Date Release Discovered 5-22-2020	API# (if applicable)

Unit Letter	Section	Township	Range	County
B	30	24S	30E	Eddy

Surface Owner: State Federal Tribal Private (Name: _____)

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 0.01	Volume Recovered (bbls) 0
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release Fluid from the sales scrubber made it into the supply gas line to the flare pilot and ultimately out of the flare starting a fire on the ground. De minimus amount of fluid impacted pad surface. A third-party contractor has been retained for remediation activities.

Form C-141

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume that results in a fire or is the result of a fire.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Adrian Baker via email to Mike.Bratcher@state.nm.us; Robert.Hamlet@state.nm.us; 'Venegas, Victoria, EMNRD'; 'Griswold, Jim, EMNRD'; 'blm_nm_cfo_spill@blm.gov'; 'Morgan, Crisha A' on Friday, May 22, 2020 10:07 AM.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why: _____ _____ _____
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u>Kyle Littrell</u> Title: <u>SH&E Supervisor</u> Signature:  Date: <u>6-5-20</u> email: <u>Kyle.Littrell@xtoenergy.com</u> Telephone: <u>432-221-7331</u>
OCD Only Received by: <u>Ramona Marcus</u> Date: <u>6/8/2020</u>

NRM2016049766

Location:	PLU 442/443 SWD Battery	
Spill Date:	5/22/2020	
Area 1		
Approximate Area =	207.00	sq. ft.
Average Saturation (or depth) of spill =	0.13	inches
Average Porosity Factor =	0.03	
VOLUME OF LEAK		
Total Crude Oil =	0.01	bbls
TOTAL VOLUME OF LEAK		
Total Crude Oil =	0.01	bbls
TOTAL VOLUME RECOVERED		
Total Crude Oil =	0.00	bbls

Incident ID	NRM2016049766
District RP	
Facility ID	
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Site Assessment/Characterization

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

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

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

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

- Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- Field data
- Data table of soil contaminant concentration data
- Depth to water determination
- Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

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

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Oil Conservation Division

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

Printed Name: Kyle Littrell Title: SH&E Supervisor
 Signature:  Date: 11/18/2020
 email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

Incident ID	NRM2016049/66
District RP	
Facility ID	
Application ID	

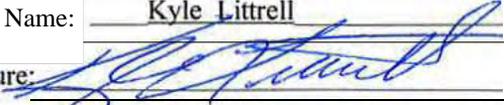
Closure

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: 11/18/2020
 email: Kyle.Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: Chad Hensley Date: 02/22/2021

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:  Date: 02/22/2021
 Printed Name: Chad Hensley Title: Environmental Specialist Advanced



November 20, 2020

District II
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

**RE: Closure Request
PLU 442/443 SWD Battery
Incident Number NRM2016049766
Eddy County, New Mexico**

To Whom It May Concern:

WSP USA, Inc. (WSP) (formerly LT Environmental, Inc.), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment, excavation, and soil sampling activities at the Poker Lake Unit (PLU) 442/443 SWD Battery (Site) in Unit B, Section 30, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the site assessment, excavation, and soil sampling activities was to address impacts to soil following a release of crude oil at the Site. Based on the field observations, field screening activities, and soil sample laboratory analytical results, XTO is submitting this Closure Request and requesting no further action (NFA) for Incident Number NRM2016049766.

RELEASE BACKGROUND

On May 22, 2020, fluid from the scrubber entered the gas line, causing a release of approximately 0.01 barrels (bbls) of crude oil through the flare stack which resulted in a small fire. The fire extinguished itself and there were no standing fluids to recover. XTO reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 5, 2020 and assigned Incident Number NRM2016049766.

SITE CHARACTERIZATION

WSP 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 United States Geological Survey (USGS) well 321205103544701, located approximately 0.61 miles northwest of the Site. The groundwater well was most recently measured in January 1998 and has a reported depth to groundwater of 231 feet bgs and a total depth of 452 feet bgs. Ground surface elevation at the groundwater well

WSP USA
508 WEST STEVENS STREET
CARLSBAD NM 88220

Tel.: 575-887-0101
wsp.com



location is 3,193 feet above mean sea level (amsl), which is approximately 35 feet higher in elevation than the Site. There are five additional groundwater wells within a 2.5-mile radius of the Site that indicate regional depth to groundwater is greater than 100 feet bgs. All wells used for depth to groundwater determination are depicted on Figure 1 and the associated referenced well records are included in Enclosure A.

The closest continuously flowing or significant watercourse to the Site is an unnamed dry wash, located approximately 1,020 feet southeast 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

Additionally, the reclamation standard of 600 mg/kg chloride and 100 mg/kg TPH was applied to the undeveloped pasture that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top four feet for areas to be reclaimed following remediation

SITE ASSESSMENT ACTIVITIES

On August 12, 2020, WSP personnel visited the Site to evaluate the release extent based on information provided on the Form C-141 and visual observations. WSP personnel collected four preliminary soil samples (SS01 through SS04) within the release extent and the north of the flare. During the site assessment it was observed the area north of the flare was impacted due to overspray from the release. Stressed vegetation was noted during release response. The four preliminary soil samples were collected from a depth of approximately 0.5 feet bgs to assess the lateral extent of impacted soil. Soil from the preliminary soil samples were field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID)



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

The preliminary soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were 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.

Laboratory analytical results for preliminary soil sample SS03 indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results for preliminary soil sample SS01 indicated that TPH-GRO/TPH-DRO, TPH, and chloride concentrations exceeded the Closure Criteria and preliminary soil sample SS02 exceeded the Closure Criteria for chloride concentration. Additionally, chloride concentration exceeds 600 mg/kg in preliminary soil sample SS04 in the top four feet of the subsurface. Based on visible staining in the release area, elevated field screening results, and laboratory analytical results for the preliminary soil samples, excavation activities were warranted.

EXCAVATION SOIL SAMPLING ACTIVITIES

Between September 9, 2020 and September 24, 2020, WSP personnel returned to the Site to oversee excavation activities as indicated by visual observations, field screening activities, and laboratory analytical results for the preliminary soil samples.

Excavation of impacted soil was completed in the areas surrounding preliminary soil samples SS01, SS02, and SS04. Excavation activities were performed using track-mounted backhoe and transport vehicle. Excavation activities occurred on pad surrounding the production equipment. In addition, impacted soil north of the pad was excavated. To direct excavation activities, WSP screened soil for volatile aromatic hydrocarbons and chloride utilizing a PID and Hach® chloride QuanTab® test strips, respectively. Photographic documentation is included in Enclosure B.

Following removal of impacted soil, WSP collected 5-point composite soil samples every 200 square feet from the sidewalls and floors of the excavations. The 5-point composite samples were collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing. The excavation was separated into two areas (on pad and pasture). The on-pad excavation measured approximately 307 square feet in area and was completed to depths ranging from approximately 2 to 3 feet bgs. A total of 2 composite floor samples, FS01 and FS02, were collected from the excavation from approximately 2 feet bgs.



Based on elevated chloride in sample FS02, the excavation was extended to 3 feet bgs in that area and resampled as FS02A. Composite soil sample SW01 was collected from the sidewalls of the excavation at depths from the ground surface to 3 feet bgs. The pasture excavation measured approximately 116 square feet and was completed at a depth of approximately 1 foot bgs. One composite sample (FS03) was collected from the excavation. Due to the shallow depth of the excavation, the soil sample represented the floor and sidewalls of the excavation. The excavation soil samples were collected, handled, and analyzed following the same procedures as described above. The excavation extent and excavation soil sample locations are presented on Figure 4.

The excavation areas totaled approximately 423 square feet. A total of approximately 30 cubic yards of impacted soil was removed during the excavation activities. The impacted soil was transported and properly disposed of at the R360 Facility in Hobbs, New Mexico. After completion of confirmation sampling, the excavation was secured with fencing. The area north of the flare stack will be reseeded and backfilled with material purchased locally and recontour the Site to match pre-existing site conditions.

SOIL ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples indicated that on-pad soil samples SS01 and SS02 exceeded the Closure Criteria for TPH and/or chloride and that sample SS04 exceeded the reclamation standard for chloride in the top four feet per NMAC 19.15.29.13.D (1).

Laboratory analytical results for excavation composite sidewall sample SW01, and composite floor samples FS01, FS02A, and FS03, collected from the final excavation extents, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Excavation confirmation samples FS03, collected from the pasture, contains concentrations of TPH and chloride in compliance with the reclamation standard. Laboratory analytical results are summarized in Table 1 and laboratory analytical reports are included as Enclosure C.

CLOSURE REQUEST

Response efforts as a result of the May 22, 2020 crude oil release included excavation and removal of impacted soil, and collection of confirmation soil samples. Based on analytical results, the impacted soil was removed to depths ranging from 1 foot bgs to 3 feet bgs. Laboratory analytical results for the excavation confirmation soil samples, collected from the final excavation extent, indicated that benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the Closure Criteria and the reclamation standard and no further remediation was required. XTO will backfill the excavation with material purchased locally and recontour the Site to match pre-existing site conditions.



Based on the confirmation soil sample analytical results indicating benzene, BTEX, TPH-GRO/TPH-DRO, TPH, and chloride concentrations were compliant with the strictest Closure Criteria, XTO respectfully requests NFA for Incident Number NRM2016049766.

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

Sincerely,

Handwritten signature of Elizabeth Naka in black ink.

Elizabeth Naka
Assistant Consultant, Environmental Scientist

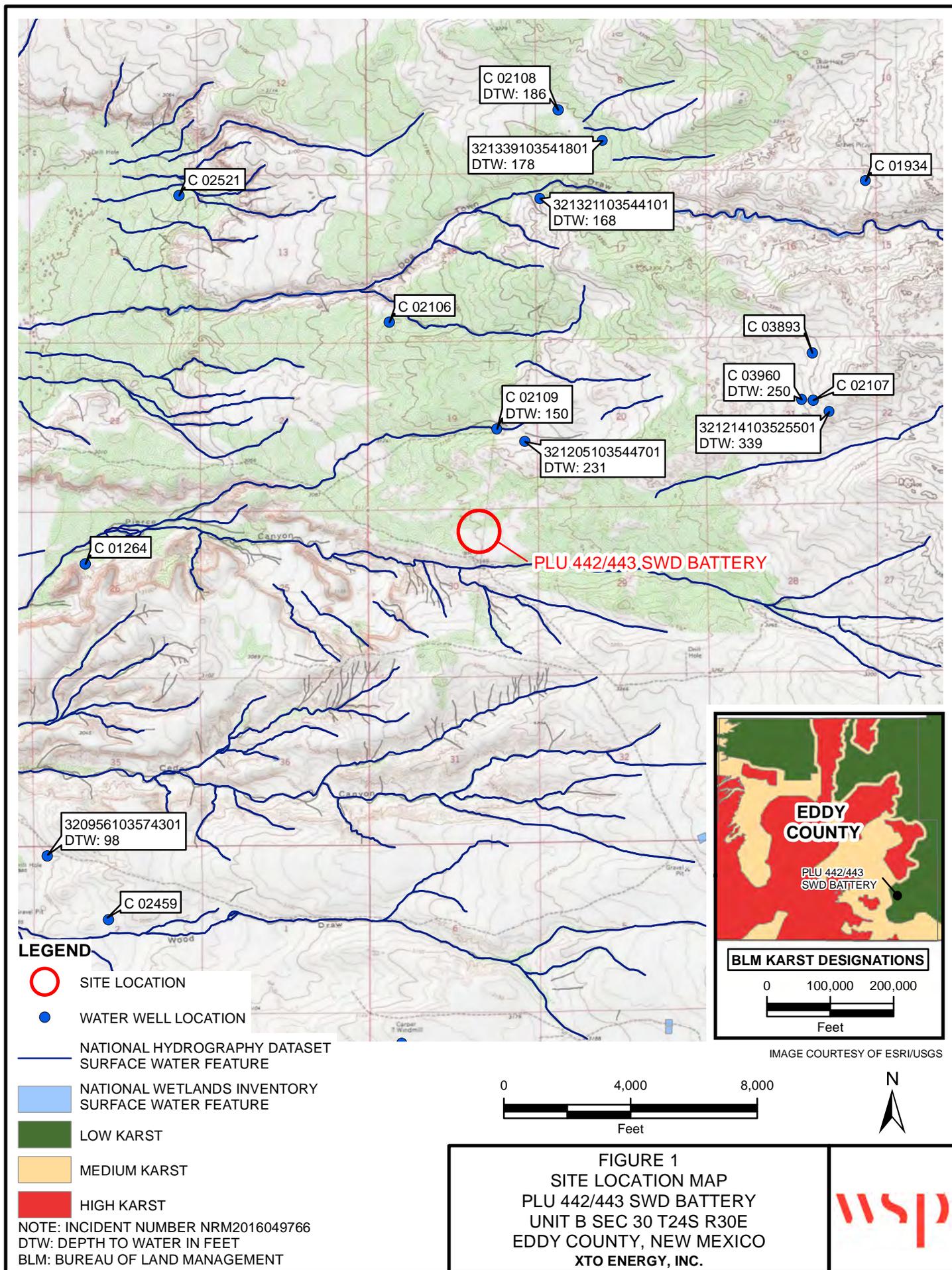
Handwritten signature of Ashley L. Ager in black ink.

Ashley L. Ager, P.G.
Managing Director, Geologist

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

Encl.

FIGURES



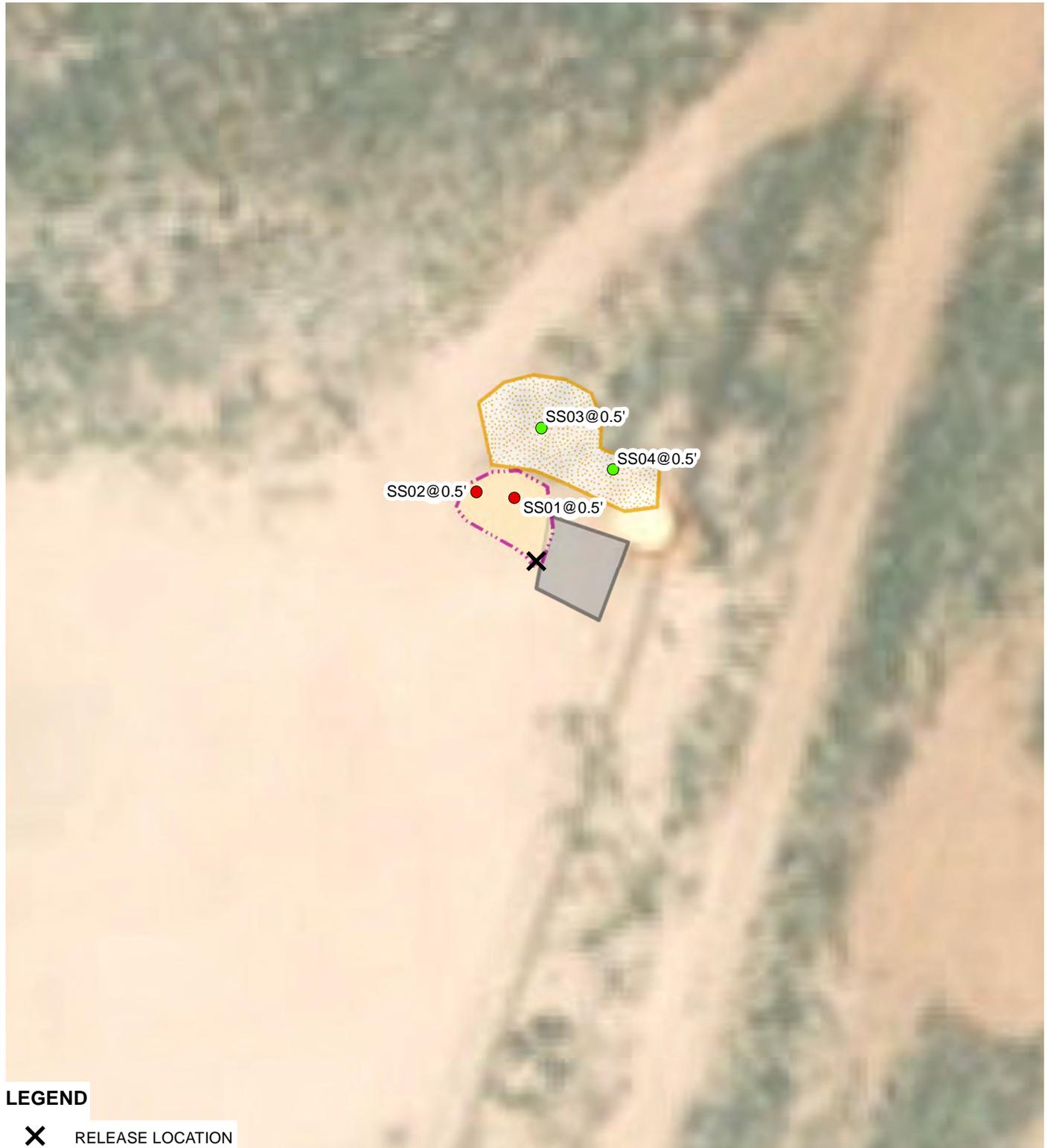


IMAGE COURTESY OF ESRI

LEGEND

-  RELEASE LOCATION
-  PRELIMINARY SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
-  PRELIMINARY SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA
-  RELEASE EXTENT
-  INFRASTRUCTURE
-  IMPACTED VEGETATION

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
NOTE: INCIDENT NUMBER NRM2016049766

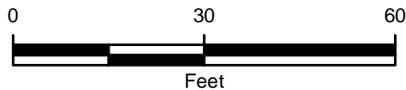


FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
 PLU 442/443 SWD BATTERY
 UNIT B SEC 30 T24S R30E
 EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012920122_PLU 442 - 443 SWD BATTERY\012920122_FIG02_PRELIMINARY_2020.mxd



TABLES

Table 1
Soil Analytical Results
PLU 442/443 SWD Battery
Incident Number: NRM2016049766
Eddy County, New Mexico
XTO Energy, Inc.

Sample ID	Sample Date	Sample Depth (ft)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-DRO (mg/kg)	TPH-GRO (mg/kg)	TPH-MRO (mg/kg)	TOTAL GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	1,000	2,500	20,000
Surface Samples										
SS01	08/12/2020	0.5	<0.00200	<0.00200	2,940	<250	631	2,940	3,570	46,000
SS02	08/12/2020	0.5	<0.00200	<0.00200	861	<49.9	223	861	1,080	30,000
SS03	09/09/2020	0.5	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	244
SS04	09/09/2020	0.5	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	748
Excavation Floor Samples										
FS01	09/09/2020	2	<0.00201	<0.00201	<50.3	<50.3	<50.3	<50.3	<50.3	519
FS02	09/09/2020	2	<0.00198	<0.00198	77.0	<50.0	<50.0	77.0	77.0	1,720
FS02A	09/24/2020	3	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	126
FS03	09/24/2020	1	<0.00202	<0.00202	<50.0	<50.0	<50.0	<50.0	<50.0	87.4
Excavation Sidewall Samples										
SW01	09/24/2020	0 - 3	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	378

ft - feet/foot

mg/kg - milligrams per kilograms

BTEX - benzene, toluene, ethylbenzene, and total xylenes

TPH - total petroleum hydrocarbons

DRO - diesel range organics

GRO - gasoline range organics

MRO - motor oil range organics

NMOCD - New Mexico Oil Conservation Division

NMAC - New Mexico Administrative Code

< - indicates result is less than the stated laboratory method practical quantitation limit

NE - Not Established

BOLD - indicates results exceed the higher of the background sample result or practical quantitation limit

ENCLOSURE A – REFERENCED WELL RECORDS



USGS Home
Contact USGS
Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- Explore the **NEW** [USGS National Water Dashboard](#) to access real-time data from over 13,500 stations nationwide.
- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321205103544701

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321205103544701 24S.30E.19.42113

Available data for this site

Groundwater: Field measurements



GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°12'05", Longitude 103°54'47" NAD27

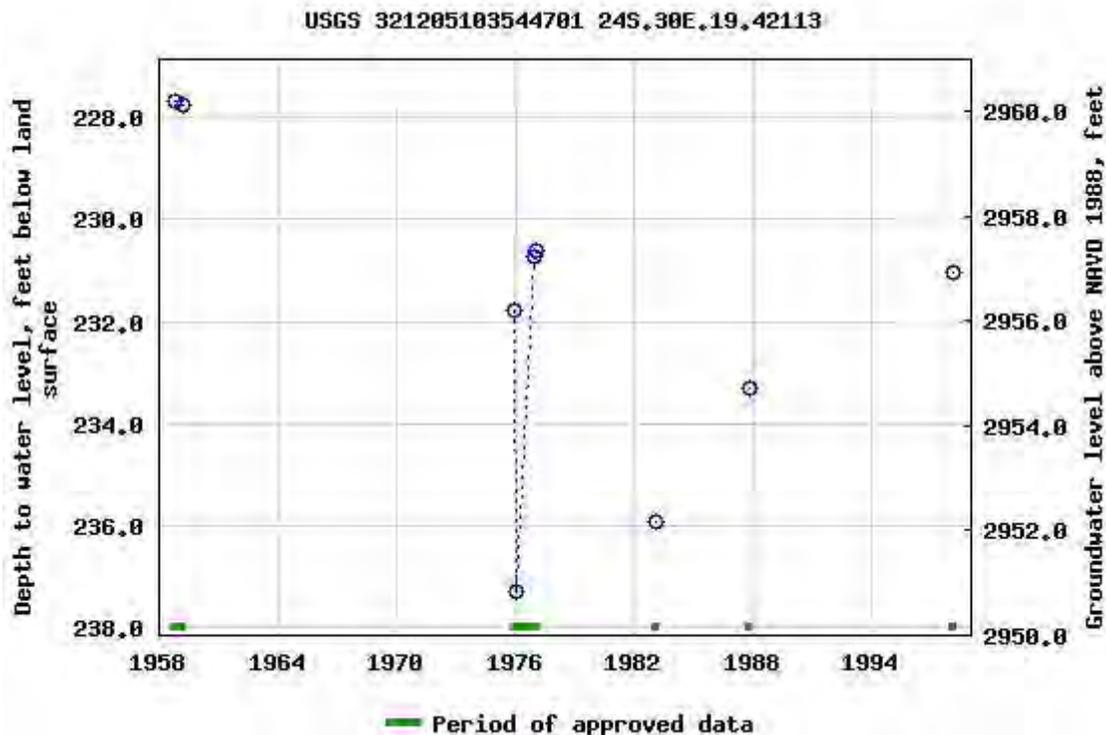
Land-surface elevation 3,188 feet above NAVD88

The depth of the well is 452 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements. [Download a presentation-quality graph](#)

- [Questions about sites/data?](#)
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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2020-11-17 11:46:20 EST

0.77 0.61 nadww01



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)				(NAD83 UTM in meters)			
		Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	02109	1	2	4	19	24S	30E	602130	3563412

Driller License:		Driller Company:		
Driller Name:	UNKNOWN			
Drill Start Date:		Drill Finish Date:	12/31/1963	Plug Date:
Log File Date:		PCW Rcv Date:		Source:
Pump Type:		Pipe Discharge Size:		Estimated Yield: 40 GPM
Casing Size:	7.00	Depth Well:	130 feet	Depth Water: 150 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/17/20 9:46 AM

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Search Results -- 1 sites found

site_no list =

- 321339103541801

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321339103541801 24S.30E.08.33222

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

Latitude 32°13'39", Longitude 103°54'18" NAD27

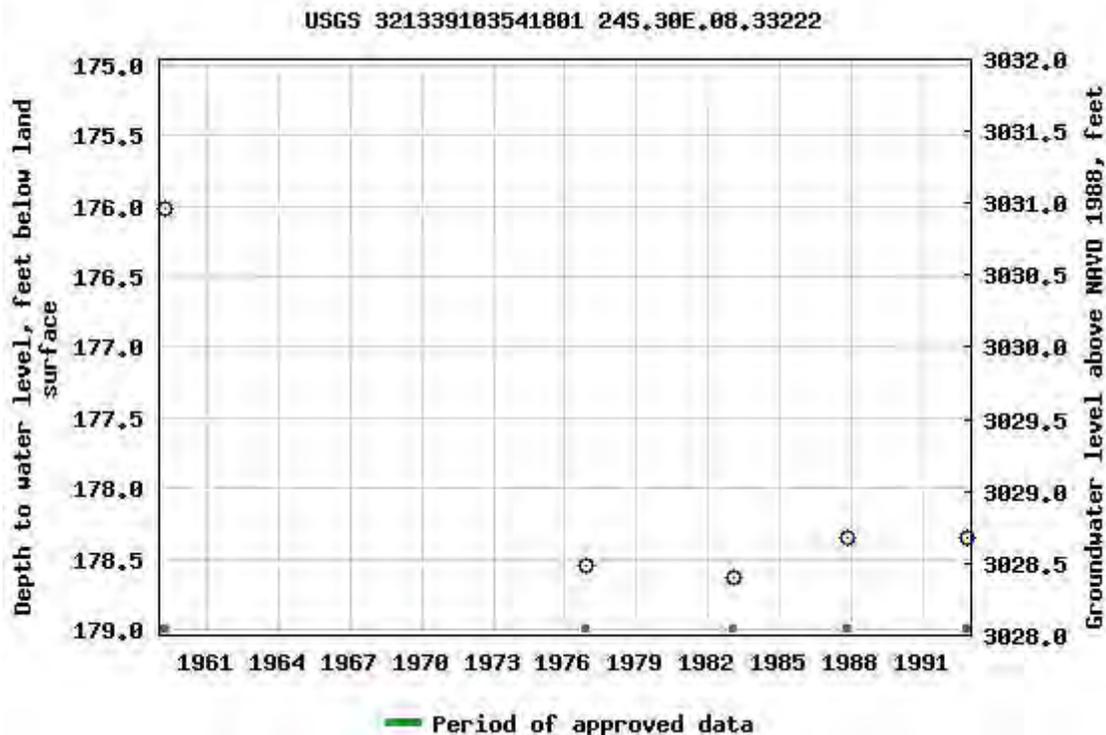
Land-surface elevation 3,207 feet above NAVD88

The depth of the well is 192 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements. [Download a presentation-quality graph](#)

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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



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0.62 0.56 nadww01



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Search Results -- 1 sites found

site_no list =

- 321321103544101

Minimum number of levels = 1

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USGS 321321103544101 24S.30E.18.22144

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

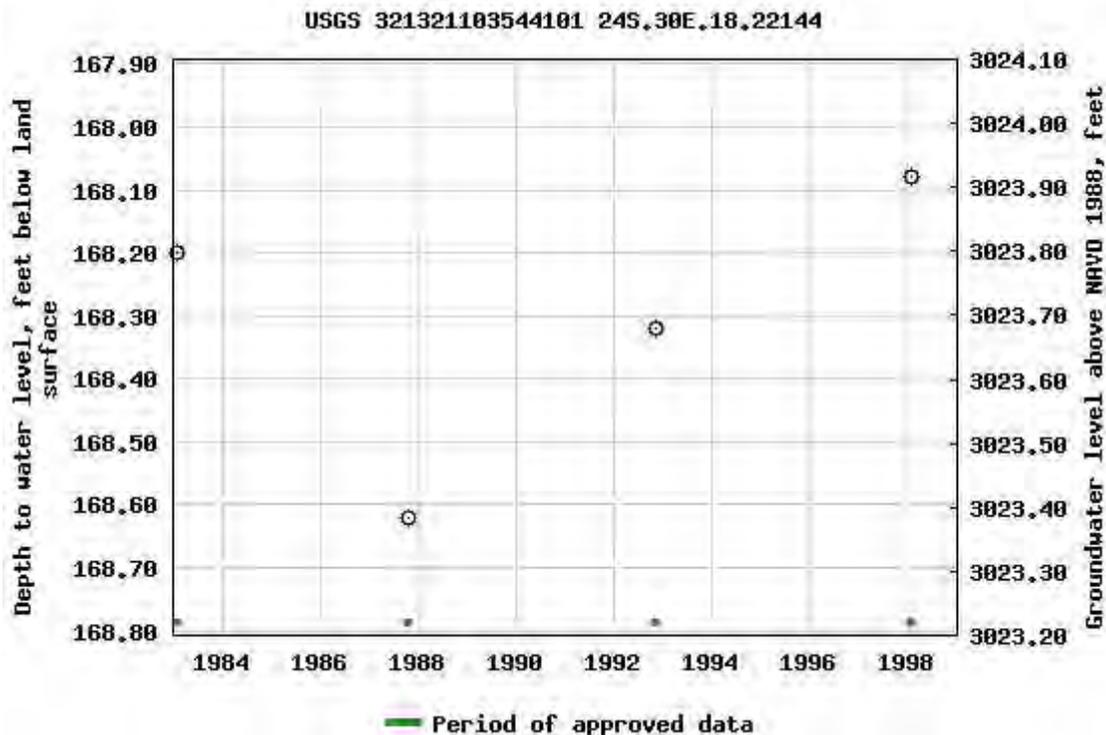
Hydrologic Unit Code 13060011

Latitude 32°13'21", Longitude 103°54'41" NAD27

Land-surface elevation 3,192 feet above NAVD88

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



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0.61 0.56 nadww01



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	Tw	Rng	X	Y
C	03960 POD1	1	3	2	21	24S	30E	605062	3563712

Driller License: 1753	Driller Company: VANGUARD WATER WELLS	
Driller Name: JACOBO FRIESSEN		
Drill Start Date: 11/12/2016	Drill Finish Date: 11/12/2016	Plug Date:
Log File Date: 11/17/2016	PCW Rev Date:	Source: Shallow
Pump Type:	Pipe Discharge Size:	Estimated Yield:
Casing Size: 6.00	Depth Well: 475 feet	Depth Water: 250 feet

Water Bearing Stratifications:	Top	Bottom	Description
	182	250	Sandstone/Gravel/Conglomerate
	402	460	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	250	290
	395	435

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11/18/20 8:36 PM

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Geographic Area:

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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321214103525501

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321214103525501 24S.30E.21.23144

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13060011

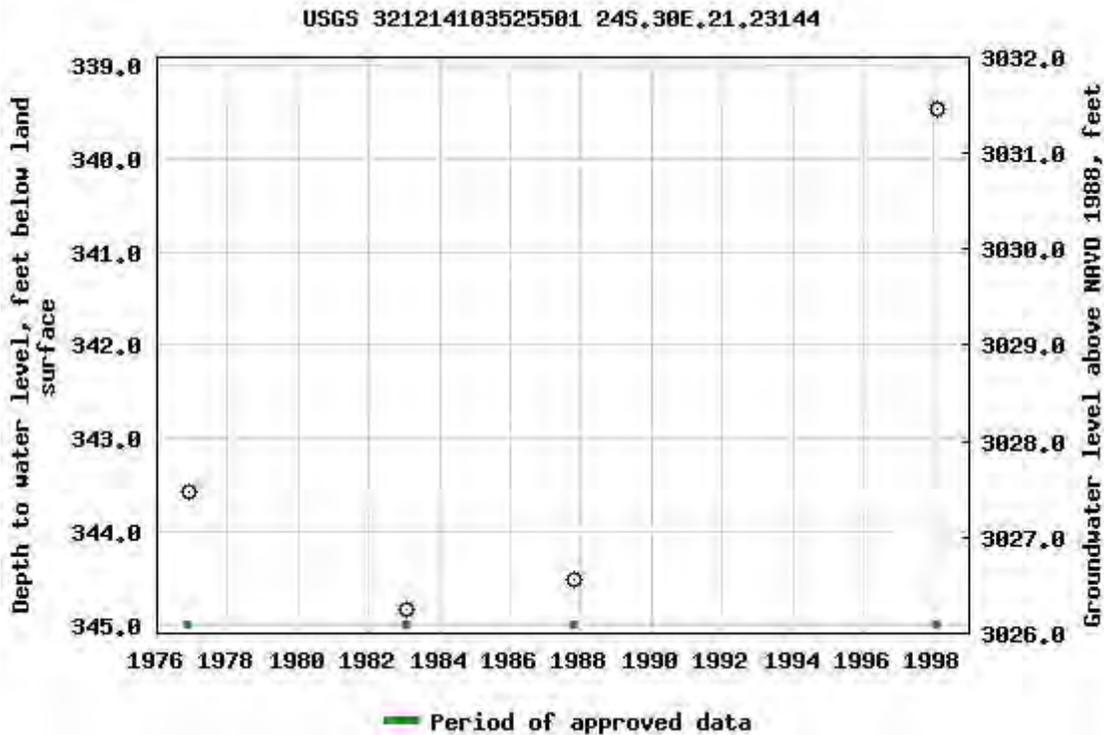
Latitude 32°12'14", Longitude 103°52'55" NAD27

Land-surface elevation 3,371 feet above NAVD88

This well is completed in the Rustler Formation (312RSLR) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.
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Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



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0.66 0.6 nadww01

ENCLOSURE B – PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU 442/443 SWD Battery Eddy County, New Mexico	NRM

Photo No.	Date	
1	August 12, 2020	
View facing southeast on pad and affected vegetation.		

Photo No.	Date	
2	August 12, 2020	
View facing east of staining around flare stack.		



PHOTOGRAPHIC LOG		
XTO Energy, Inc.	PLU 442/443 SWD Battery Eddy County, New Mexico	NRM

Photo No.	Date	
3	September 25, 2020	
View facing south of pad excavation.		

Photo No.	Date	
4	September 25, 2020	
View facing east of pasture excavation.		

ENLOSURE C – LABORATORY ANALYTICAL REPORTS



Certificate of Analysis Summary 669976

LT Environmental, Inc., Arvada, CO

Project Name: PLU 442-443

Project Id: 012920122

Date Received in Lab: Thu 08.13.2020 11:45

Contact: Dan Moir

Report Date: 08.17.2020 11:21

Project Location:

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	669976-001	669976-002				
	Field Id:	SS01	SS02				
	Depth:	0.5- ft	0.5- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	08.12.2020 15:09	08.12.2020 15:17				
BTEX by EPA 8021B	Extracted:	08.14.2020 08:47	08.14.2020 08:47				
	Analyzed:	08.14.2020 16:06	08.14.2020 16:29				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00200 0.00200				
	Toluene	<0.00200 0.00200	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200	<0.00200 0.00200				
	m,p-Xylenes	<0.00399 0.00399	<0.00399 0.00399				
	o-Xylene	<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200	<0.00200 0.00200					
Chloride by EPA 300	Extracted:	08.14.2020 11:00	08.14.2020 11:00				
	Analyzed:	08.14.2020 12:40	08.14.2020 12:57				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride	46000 495	30000 498					
TPH by SW8015 Mod	Extracted:	08.13.2020 17:10	08.13.2020 17:10				
	Analyzed:	08.13.2020 23:34	08.13.2020 22:54				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<250 250	<49.9 49.9				
	Diesel Range Organics (DRO)	2940 250	861 49.9				
	Motor Oil Range Hydrocarbons (MRO)	631 250	223 49.9				
	Total GRO-DRO	2940 250	861 49.9				
Total TPH	3570 250	1080 49.9					

BRL - Below Reporting Limit

Jessica Kramer

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



Analytical Report 669976

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 442-443

012920122

08.17.2020

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



08.17.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **669976**
PLU 442-443
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669976. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669976 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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 669976

LT Environmental, Inc., Arvada, CO

PLU 442-443

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08.12.2020 15:09	0.5 ft	669976-001
SS02	S	08.12.2020 15:17	0.5 ft	669976-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 442-443

Project ID: 012920122
Work Order Number(s): 669976

Report Date: 08.17.2020
Date Received: 08.13.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 669976

LT Environmental, Inc., Arvada, CO

PLU 442-443

Sample Id: **SS01** Matrix: Soil Date Received: 08.13.2020 11:45
 Lab Sample Id: 669976-001 Date Collected: 08.12.2020 15:09 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.14.2020 11:00 Basis: Wet Weight
 Seq Number: 3134602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	46000	495	mg/kg	08.14.2020 12:40		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.13.2020 17:10 Basis: Wet Weight
 Seq Number: 3134547

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<250	250	mg/kg	08.13.2020 23:34	U	5
Diesel Range Organics (DRO)	C10C28DRO	2940	250	mg/kg	08.13.2020 23:34		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	631	250	mg/kg	08.13.2020 23:34		5
Total GRO-DRO	PHC628	2940	250	mg/kg	08.13.2020 23:34		5
Total TPH	PHC635	3570	250	mg/kg	08.13.2020 23:34		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	08.13.2020 23:34	
o-Terphenyl	84-15-1	105	%	70-135	08.13.2020 23:34	



Certificate of Analytical Results 669976

LT Environmental, Inc., Arvada, CO

PLU 442-443

Sample Id: SS01	Matrix: Soil	Date Received: 08.13.2020 11:45
Lab Sample Id: 669976-001	Date Collected: 08.12.2020 15:09	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 08.14.2020 08:47	Basis: Wet Weight
Seq Number: 3134693		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.14.2020 16:06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.14.2020 16:06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	70-130	08.14.2020 16:06	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.14.2020 16:06	



Certificate of Analytical Results 669976

LT Environmental, Inc., Arvada, CO

PLU 442-443

Sample Id: **SS02** Matrix: Soil Date Received: 08.13.2020 11:45
 Lab Sample Id: 669976-002 Date Collected: 08.12.2020 15:17 Sample Depth: 0.5 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 08.14.2020 11:00 Basis: Wet Weight
 Seq Number: 3134602

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	30000	498	mg/kg	08.14.2020 12:57		50

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 08.13.2020 17:10 Basis: Wet Weight
 Seq Number: 3134547

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.13.2020 22:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	861	49.9	mg/kg	08.13.2020 22:54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	223	49.9	mg/kg	08.13.2020 22:54		1
Total GRO-DRO	PHC628	861	49.9	mg/kg	08.13.2020 22:54		1
Total TPH	PHC635	1080	49.9	mg/kg	08.13.2020 22:54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.13.2020 22:54	
o-Terphenyl	84-15-1	95	%	70-135	08.13.2020 22:54	



Certificate of Analytical Results 669976

LT Environmental, Inc., Arvada, CO

PLU 442-443

Sample Id: SS02	Matrix: Soil	Date Received: 08.13.2020 11:45
Lab Sample Id: 669976-002	Date Collected: 08.12.2020 15:17	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 08.14.2020 08:47	Basis: Wet Weight
Seq Number: 3134693		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.14.2020 16:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.14.2020 16:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.14.2020 16:29	
4-Bromofluorobenzene	460-00-4	93	%	70-130	08.14.2020 16:29	



LT Environmental, Inc.

PLU 442-443

Analytical Method: Chloride by EPA 300

Seq Number: 3134602
 MB Sample Id: 7709464-1-BLK

Matrix: Solid

LCS Sample Id: 7709464-1-BKS

Prep Method: E300P

Date Prep: 08.14.2020

LCSD Sample Id: 7709464-1-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	260	104	263	105	90-110	1	20	mg/kg	08.14.2020 12:29	

Analytical Method: Chloride by EPA 300

Seq Number: 3134602
 Parent Sample Id: 670038-004

Matrix: Soil

MS Sample Id: 670038-004 S

Prep Method: E300P

Date Prep: 08.14.2020

MSD Sample Id: 670038-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10900	198	11100	101	11100	101	90-110	0	20	mg/kg	08.14.2020 16:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3134602
 Parent Sample Id: 670079-003

Matrix: Soil

MS Sample Id: 670079-003 S

Prep Method: E300P

Date Prep: 08.14.2020

MSD Sample Id: 670079-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	13.7	200	208	97	211	99	90-110	1	20	mg/kg	08.14.2020 14:18	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134547
 MB Sample Id: 7709452-1-BLK

Matrix: Solid

LCS Sample Id: 7709452-1-BKS

Prep Method: SW8015P

Date Prep: 08.13.2020

LCSD Sample Id: 7709452-1-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	906	91	70-135	3	35	mg/kg	08.13.2020 19:12	
Diesel Range Organics (DRO)	<50.0	1000	919	92	936	94	70-135	2	35	mg/kg	08.13.2020 19:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		113		115		70-135	%	08.13.2020 19:12
o-Terphenyl	107		105		105		70-135	%	08.13.2020 19:12

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134547

Matrix: Solid

MB Sample Id: 7709452-1-BLK

Prep Method: SW8015P

Date Prep: 08.13.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.13.2020 18:52	

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

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

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

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



LT Environmental, Inc.

PLU 442-443

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134547

Parent Sample Id: 669943-001

Matrix: Soil

MS Sample Id: 669943-001 S

Prep Method: SW8015P

Date Prep: 08.13.2020

MSD Sample Id: 669943-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	883	89	914	90	70-135	3	35	mg/kg	08.13.2020 20:12	
Diesel Range Organics (DRO)	<49.8	995	921	93	947	94	70-135	3	35	mg/kg	08.13.2020 20:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		107		70-135	%	08.13.2020 20:12
o-Terphenyl	94		97		70-135	%	08.13.2020 20:12

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134693

MB Sample Id: 7709453-1-BLK

Matrix: Solid

LCS Sample Id: 7709453-1-BKS

Prep Method: SW5035A

Date Prep: 08.14.2020

LCSD Sample Id: 7709453-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.110	110	0.101	101	70-130	9	35	mg/kg	08.14.2020 14:03	
Toluene	<0.00200	0.100	0.105	105	0.0961	96	70-130	9	35	mg/kg	08.14.2020 14:03	
Ethylbenzene	<0.00200	0.100	0.0978	98	0.0893	89	71-129	9	35	mg/kg	08.14.2020 14:03	
m,p-Xylenes	<0.00400	0.200	0.198	99	0.181	91	70-135	9	35	mg/kg	08.14.2020 14:03	
o-Xylene	<0.00200	0.100	0.0981	98	0.0896	90	71-133	9	35	mg/kg	08.14.2020 14:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		98		98		70-130	%	08.14.2020 14:03
4-Bromofluorobenzene	93		98		98		70-130	%	08.14.2020 14:03

Analytical Method: BTEX by EPA 8021B

Seq Number: 3134693

Parent Sample Id: 669976-001

Matrix: Soil

MS Sample Id: 669976-001 S

Prep Method: SW5035A

Date Prep: 08.14.2020

MSD Sample Id: 669976-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.105	105	0.105	105	70-130	0	35	mg/kg	08.15.2020 01:59	
Toluene	<0.00199	0.0996	0.100	100	0.0999	100	70-130	0	35	mg/kg	08.15.2020 01:59	
Ethylbenzene	<0.00199	0.0996	0.0958	96	0.0926	93	71-129	3	35	mg/kg	08.15.2020 01:59	
m,p-Xylenes	<0.00398	0.199	0.188	94	0.188	94	70-135	0	35	mg/kg	08.15.2020 01:59	
o-Xylene	<0.00199	0.0996	0.0936	94	0.0933	94	71-133	0	35	mg/kg	08.15.2020 01:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	08.15.2020 01:59
4-Bromofluorobenzene	101		99		70-130	%	08.15.2020 01:59

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

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

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

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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08.13.2020 11.45.00 AM

Work Order #: 669976

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)?	2.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	Yes	
#6*Custody Seals Signed and dated?	Yes	
#7 *Chain of Custody present?	Yes	
#8 Any missing/extra samples?	No	
#9 Chain of Custody signed when relinquished/ received?	Yes	
#10 Chain of Custody agrees with sample labels/matrix?	Yes	
#11 Container label(s) legible and intact?	Yes	
#12 Samples in proper container/ bottle?	Yes	Samples received in proper 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: Cloe Clifton Date: 08.13.2020
Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 08.14.2020
Jessica Kramer



Certificate of Analysis Summary 672171

LT Environmental, Inc., Arvada, CO

Project Name: PLU 442/443 SWD Battery

Project Id: 012920122
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 09.09.2020 15:50
Report Date: 09.10.2020 11:14
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	672171-001	672171-002				
	<i>Field Id:</i>	SS03	SS04				
	<i>Depth:</i>	.5- ft	.5- ft				
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	09.09.2020 10:58	09.09.2020 11:35				
BTEX by EPA 8021B	<i>Extracted:</i>	09.09.2020 16:16	09.09.2020 16:16				
	<i>Analyzed:</i>	09.09.2020 22:23	09.09.2020 22:45				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Benzene		<0.00200 0.00200	<0.00200 0.00200				
Toluene		<0.00200 0.00200	<0.00200 0.00200				
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200				
m,p-Xylenes		<0.00399 0.00399	<0.00399 0.00399				
o-Xylene		<0.00200 0.00200	<0.00200 0.00200				
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200				
Total BTEX		<0.00200 0.00200	<0.00200 0.00200				
Chloride by EPA 300	<i>Extracted:</i>	09.09.2020 16:30	09.09.2020 16:30				
	<i>Analyzed:</i>	09.09.2020 18:25	09.09.2020 18:31				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Chloride		244 9.90	748 9.98				
TPH by SW8015 Mod	<i>Extracted:</i>	09.09.2020 17:30	09.09.2020 17:30				
	<i>Analyzed:</i>	09.09.2020 22:19	09.09.2020 23:20				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1	<50.0 50.0				
Diesel Range Organics (DRO)		<50.1 50.1	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.0 50.0				
Total GRO-DRO		<50.1 50.1	<50.0 50.0				
Total TPH		<50.1 50.1	<50.0 50.0				

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 672171

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 442/443 SWD Battery

012920122

09.10.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.10.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **672171**
PLU 442/443 SWD Battery
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 672171. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 672171 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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 672171

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS03	S	09.09.2020 10:58	.5 ft	672171-001
SS04	S	09.09.2020 11:35	.5 ft	672171-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 442/443 SWD Battery

Project ID: 012920122
Work Order Number(s): 672171

Report Date: 09.10.2020
Date Received: 09.09.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672171

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: SS03	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672171-001	Date Collected: 09.09.2020 10:58	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:30	Basis: Wet Weight
Seq Number: 3136730		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	9.90	mg/kg	09.09.2020 18:25		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 09.09.2020 17:30	Basis: Wet Weight
Seq Number: 3136739		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.09.2020 22:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.09.2020 22:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.09.2020 22:19	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.09.2020 22:19	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.09.2020 22:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.09.2020 22:19	
o-Terphenyl	84-15-1	122	%	70-135	09.09.2020 22:19	



Certificate of Analytical Results 672171

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: SS03	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672171-001	Date Collected: 09.09.2020 10:58	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:16	Basis: Wet Weight
Seq Number: 3136727		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.09.2020 22:23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.09.2020 22:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	09.09.2020 22:23	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.09.2020 22:23	



Certificate of Analytical Results 672171

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: SS04	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672171-002	Date Collected: 09.09.2020 11:35	Sample Depth: .5 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:30	Basis: Wet Weight
Seq Number: 3136730		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	748	9.98	mg/kg	09.09.2020 18:31		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 09.09.2020 17:30	Basis: Wet Weight
Seq Number: 3136739		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.09.2020 23:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.09.2020 23:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.09.2020 23:20	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.09.2020 23:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.09.2020 23:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.09.2020 23:20	
o-Terphenyl	84-15-1	120	%	70-135	09.09.2020 23:20	



Certificate of Analytical Results 672171

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: SS04	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672171-002	Date Collected: 09.09.2020 11:35	Sample Depth: .5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:16	Basis: Wet Weight
Seq Number: 3136727		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.09.2020 22:45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.09.2020 22:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.09.2020 22:45	
4-Bromofluorobenzene	460-00-4	92	%	70-130	09.09.2020 22:45	



QC Summary 672171

LT Environmental, Inc.
 PLU 442/443 SWD Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 MB Sample Id: 7711008-1-BLK

Matrix: Solid
 LCS Sample Id: 7711008-1-BKS

Prep Method: E300P
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711008-1-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	251	100	252	101	90-110	0	20	mg/kg	09.09.2020 14:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 Parent Sample Id: 672074-001

Matrix: Soil
 MS Sample Id: 672074-001 S

Prep Method: E300P
 Date Prep: 09.09.2020
 MSD Sample Id: 672074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	72.0	200	275	102	276	101	90-110	0	20	mg/kg	09.09.2020 14:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 Parent Sample Id: 672167-003

Matrix: Soil
 MS Sample Id: 672167-003 S

Prep Method: E300P
 Date Prep: 09.09.2020
 MSD Sample Id: 672167-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	158	200	362	102	362	102	90-110	0	20	mg/kg	09.09.2020 17:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136739
 MB Sample Id: 7711054-1-BLK

Matrix: Solid
 LCS Sample Id: 7711054-1-BKS

Prep Method: SW8015P
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711054-1-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	944	94	861	86	70-135	9	35	mg/kg	09.09.2020 21:39	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	967	97	70-135	7	35	mg/kg	09.09.2020 21:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		128		116		70-135	%	09.09.2020 21:39
o-Terphenyl	99		127		110		70-135	%	09.09.2020 21:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136739

Matrix: Solid
 MB Sample Id: 7711054-1-BLK

Prep Method: SW8015P
 Date Prep: 09.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.09.2020 21:19	

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

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

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

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



LT Environmental, Inc.
 PLU 442/443 SWD Battery

Analytical Method: TPH by SW8015 Mod
 Seq Number: 3136739
 Parent Sample Id: 672171-001

Matrix: Soil
 MS Sample Id: 672171-001 S

Prep Method: SW8015P
 Date Prep: 09.09.2020
 MSD Sample Id: 672171-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	894	90	916	92	70-135	2	35	mg/kg	09.09.2020 22:40	
Diesel Range Organics (DRO)	<49.8	995	983	99	1030	103	70-135	5	35	mg/kg	09.09.2020 22:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	131		134		70-135	%	09.09.2020 22:40
o-Terphenyl	121		126		70-135	%	09.09.2020 22:40

Analytical Method: BTEX by EPA 8021B
 Seq Number: 3136727
 MB Sample Id: 7711007-1-BLK

Matrix: Solid
 LCS Sample Id: 7711007-1-BKS

Prep Method: SW5035A
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711007-1-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	0.0965	97	0.0997	100	70-130	3	35	mg/kg	09.09.2020 14:34	
Toluene	<0.00200	0.100	0.0953	95	0.0983	98	70-130	3	35	mg/kg	09.09.2020 14:34	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.0926	93	71-129	3	35	mg/kg	09.09.2020 14:34	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.186	93	70-135	3	35	mg/kg	09.09.2020 14:34	
o-Xylene	<0.00200	0.100	0.0901	90	0.0924	92	71-133	3	35	mg/kg	09.09.2020 14:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	09.09.2020 14:34
4-Bromofluorobenzene	88		89		87		70-130	%	09.09.2020 14:34

Analytical Method: BTEX by EPA 8021B
 Seq Number: 3136727
 Parent Sample Id: 672074-001

Matrix: Soil
 MS Sample Id: 672074-001 S

Prep Method: SW5035A
 Date Prep: 09.09.2020
 MSD Sample Id: 672074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.123	123	0.114	115	70-130	8	35	mg/kg	09.09.2020 15:19	
Toluene	<0.00200	0.0998	0.121	121	0.112	113	70-130	8	35	mg/kg	09.09.2020 15:19	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.105	106	71-129	8	35	mg/kg	09.09.2020 15:19	
m,p-Xylenes	<0.00399	0.200	0.229	115	0.211	106	70-135	8	35	mg/kg	09.09.2020 15:19	
o-Xylene	<0.00200	0.0998	0.112	112	0.103	104	71-133	8	35	mg/kg	09.09.2020 15:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	09.09.2020 15:19
4-Bromofluorobenzene	89		90		70-130	%	09.09.2020 15:19

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

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

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

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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.09.2020 03.50.00 PM

Work Order #: 672171

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.09.2020
Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 09.10.2020
Jessica Kramer



Certificate of Analysis Summary 672175

LT Environmental, Inc., Arvada, CO

Project Name: PLU 442/443 SWD Battery

Project Id: 012920122
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed 09.09.2020 15:50
Report Date: 09.10.2020 11:15
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	672175-001		672175-002				
	<i>Field Id:</i>	FS01		FS02				
	<i>Depth:</i>	2- ft		2- ft				
	<i>Matrix:</i>	SOIL		SOIL				
	<i>Sampled:</i>	09.09.2020 10:54		09.09.2020 10:56				
BTEX by EPA 8021B	<i>Extracted:</i>	09.09.2020 16:16		09.09.2020 16:16				
	<i>Analyzed:</i>	09.09.2020 23:53		09.10.2020 00:15				
	<i>Units/RL:</i>	mg/kg	RL	mg/kg	RL			
Benzene		<0.00201	0.00201	<0.00198	0.00198			
Toluene		<0.00201	0.00201	<0.00198	0.00198			
Ethylbenzene		<0.00201	0.00201	<0.00198	0.00198			
m,p-Xylenes		<0.00402	0.00402	<0.00397	0.00397			
o-Xylene		<0.00201	0.00201	<0.00198	0.00198			
Total Xylenes		<0.00201	0.00201	<0.00198	0.00198			
Total BTEX		<0.00201	0.00201	<0.00198	0.00198			
Chloride by EPA 300	<i>Extracted:</i>	09.09.2020 16:30		09.09.2020 16:30				
	<i>Analyzed:</i>	09.09.2020 18:48		09.09.2020 18:54				
	<i>Units/RL:</i>	mg/kg	RL	mg/kg	RL			
Chloride		519	10.0	1720	50.4			
TPH by SW8015 Mod	<i>Extracted:</i>	09.09.2020 17:30		09.09.2020 17:30				
	<i>Analyzed:</i>	09.10.2020 00:21		09.10.2020 00:41				
	<i>Units/RL:</i>	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		<50.3	50.3	<50.0	50.0			
Diesel Range Organics (DRO)		<50.3	50.3	77.0	50.0			
Motor Oil Range Hydrocarbons (MRO)		<50.3	50.3	<50.0	50.0			
Total GRO-DRO		<50.3	50.3	77.0	50.0			
Total TPH		<50.3	50.3	77.0	50.0			

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 672175

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 442/443 SWD Battery

012920122

09.10.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.10.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **672175**
PLU 442/443 SWD Battery
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 672175. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 672175 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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 672175

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	09.09.2020 10:54	2 ft	672175-001
FS02	S	09.09.2020 10:56	2 ft	672175-002



CASE NARRATIVE

Client Name: *LT Environmental, Inc.*

Project Name: *PLU 442/443 SWD Battery*

Project ID: 012920122
Work Order Number(s): 672175

Report Date: 09.10.2020
Date Received: 09.09.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 672175

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: **FS01** Matrix: Soil Date Received: 09.09.2020 15:50
 Lab Sample Id: 672175-001 Date Collected: 09.09.2020 10:54 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.09.2020 16:30 Basis: Wet Weight
 Seq Number: 3136730

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	519	10.0	mg/kg	09.09.2020 18:48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.09.2020 17:30 Basis: Wet Weight
 Seq Number: 3136739

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	09.10.2020 00:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	09.10.2020 00:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	09.10.2020 00:21	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	09.10.2020 00:21	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	09.10.2020 00:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	09.10.2020 00:21	
o-Terphenyl	84-15-1	109	%	70-135	09.10.2020 00:21	



Certificate of Analytical Results 672175

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: FS01	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672175-001	Date Collected: 09.09.2020 10:54	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:16	Basis: Wet Weight
Seq Number: 3136727		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.09.2020 23:53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.09.2020 23:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.09.2020 23:53	
4-Bromofluorobenzene	460-00-4	87	%	70-130	09.09.2020 23:53	



Certificate of Analytical Results 672175

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: FS02	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672175-002	Date Collected: 09.09.2020 10:56	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:30	Basis: Wet Weight
Seq Number: 3136730		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1720	50.4	mg/kg	09.09.2020 18:54		5

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 09.09.2020 17:30	Basis: Wet Weight
Seq Number: 3136739		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.10.2020 00:41	U	1
Diesel Range Organics (DRO)	C10C28DRO	77.0	50.0	mg/kg	09.10.2020 00:41		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.10.2020 00:41	U	1
Total GRO-DRO	PHC628	77.0	50.0	mg/kg	09.10.2020 00:41		1
Total TPH	PHC635	77.0	50.0	mg/kg	09.10.2020 00:41		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.10.2020 00:41	
o-Terphenyl	84-15-1	109	%	70-135	09.10.2020 00:41	



Certificate of Analytical Results 672175

LT Environmental, Inc., Arvada, CO

PLU 442/443 SWD Battery

Sample Id: FS02	Matrix: Soil	Date Received: 09.09.2020 15:50
Lab Sample Id: 672175-002	Date Collected: 09.09.2020 10:56	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.09.2020 16:16	Basis: Wet Weight
Seq Number: 3136727		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.10.2020 00:15	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.10.2020 00:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90	%	70-130	09.10.2020 00:15	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.10.2020 00:15	



LT Environmental, Inc.
 PLU 442/443 SWD Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 MB Sample Id: 7711008-1-BLK

Matrix: Solid
 LCS Sample Id: 7711008-1-BKS

Prep Method: E300P
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711008-1-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	251	100	252	101	90-110	0	20	mg/kg	09.09.2020 14:28	

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 Parent Sample Id: 672074-001

Matrix: Soil
 MS Sample Id: 672074-001 S

Prep Method: E300P
 Date Prep: 09.09.2020
 MSD Sample Id: 672074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	72.0	200	275	102	276	101	90-110	0	20	mg/kg	09.09.2020 14:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3136730
 Parent Sample Id: 672167-003

Matrix: Soil
 MS Sample Id: 672167-003 S

Prep Method: E300P
 Date Prep: 09.09.2020
 MSD Sample Id: 672167-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	158	200	362	102	362	102	90-110	0	20	mg/kg	09.09.2020 17:46	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136739
 MB Sample Id: 7711054-1-BLK

Matrix: Solid
 LCS Sample Id: 7711054-1-BKS

Prep Method: SW8015P
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711054-1-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	944	94	861	86	70-135	9	35	mg/kg	09.09.2020 21:39	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	967	97	70-135	7	35	mg/kg	09.09.2020 21:39	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		128		116		70-135	%	09.09.2020 21:39
o-Terphenyl	99		127		110		70-135	%	09.09.2020 21:39

Analytical Method: TPH by SW8015 Mod

Seq Number: 3136739

Matrix: Solid
 MB Sample Id: 7711054-1-BLK

Prep Method: SW8015P
 Date Prep: 09.09.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.09.2020 21:19	

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

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

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

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



LT Environmental, Inc.
 PLU 442/443 SWD Battery

Analytical Method: TPH by SW8015 Mod
 Seq Number: 3136739
 Parent Sample Id: 672171-001

Matrix: Soil
 MS Sample Id: 672171-001 S

Prep Method: SW8015P
 Date Prep: 09.09.2020
 MSD Sample Id: 672171-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	995	894	90	916	92	70-135	2	35	mg/kg	09.09.2020 22:40	
Diesel Range Organics (DRO)	<49.8	995	983	99	1030	103	70-135	5	35	mg/kg	09.09.2020 22:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	131		134		70-135	%	09.09.2020 22:40
o-Terphenyl	121		126		70-135	%	09.09.2020 22:40

Analytical Method: BTEX by EPA 8021B
 Seq Number: 3136727
 MB Sample Id: 7711007-1-BLK

Matrix: Solid
 LCS Sample Id: 7711007-1-BKS

Prep Method: SW5035A
 Date Prep: 09.09.2020
 LCSD Sample Id: 7711007-1-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	0.0965	97	0.0997	100	70-130	3	35	mg/kg	09.09.2020 14:34	
Toluene	<0.00200	0.100	0.0953	95	0.0983	98	70-130	3	35	mg/kg	09.09.2020 14:34	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.0926	93	71-129	3	35	mg/kg	09.09.2020 14:34	
m,p-Xylenes	<0.00400	0.200	0.181	91	0.186	93	70-135	3	35	mg/kg	09.09.2020 14:34	
o-Xylene	<0.00200	0.100	0.0901	90	0.0924	92	71-133	3	35	mg/kg	09.09.2020 14:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		99		70-130	%	09.09.2020 14:34
4-Bromofluorobenzene	88		89		87		70-130	%	09.09.2020 14:34

Analytical Method: BTEX by EPA 8021B
 Seq Number: 3136727
 Parent Sample Id: 672074-001

Matrix: Soil
 MS Sample Id: 672074-001 S

Prep Method: SW5035A
 Date Prep: 09.09.2020
 MSD Sample Id: 672074-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.123	123	0.114	115	70-130	8	35	mg/kg	09.09.2020 15:19	
Toluene	<0.00200	0.0998	0.121	121	0.112	113	70-130	8	35	mg/kg	09.09.2020 15:19	
Ethylbenzene	<0.00200	0.0998	0.114	114	0.105	106	71-129	8	35	mg/kg	09.09.2020 15:19	
m,p-Xylenes	<0.00399	0.200	0.229	115	0.211	106	70-135	8	35	mg/kg	09.09.2020 15:19	
o-Xylene	<0.00200	0.0998	0.112	112	0.103	104	71-133	8	35	mg/kg	09.09.2020 15:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		99		70-130	%	09.09.2020 15:19
4-Bromofluorobenzene	89		90		70-130	%	09.09.2020 15:19

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

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

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

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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.09.2020 03.50.00 PM

Work Order #: 672175

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.09.2020

Checklist reviewed by: Jessica Kramer Date: 09.10.2020



Certificate of Analysis Summary 673497

LT Environmental, Inc., Arvada, CO

Project Name: PLU 442-443 SWD Battery

Project Id: 012920122
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Thu 09.24.2020 12:22
Report Date: 09.28.2020 14:18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	673497-001	673497-002	673497-003			
	<i>Field Id:</i>	FS02A	FS03	SW01			
	<i>Depth:</i>	3- ft	1- ft	0-3 ft			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	09.24.2020 09:44	09.24.2020 09:46	09.24.2020 10:03			
BTEX by EPA 8021B	<i>Extracted:</i>	09.25.2020 15:39	09.25.2020 15:39	09.25.2020 15:39			
	<i>Analyzed:</i>	09.26.2020 09:31	09.26.2020 09:53	09.26.2020 10:16			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
Toluene		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
Ethylbenzene		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
m,p-Xylenes		<0.00403 0.00403	<0.00403 0.00403	<0.00396 0.00396			
o-Xylene		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
Total Xylenes		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
Total BTEX		<0.00202 0.00202	<0.00202 0.00202	<0.00198 0.00198			
Chloride by EPA 300	<i>Extracted:</i>	09.24.2020 16:44	09.24.2020 16:44	09.24.2020 16:44			
	<i>Analyzed:</i>	09.24.2020 23:35	09.24.2020 23:41	09.24.2020 23:47			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		126 9.96	87.4 10.0	378 10.0			
TPH by SW8015 Mod	<i>Extracted:</i>	09.25.2020 10:30	09.25.2020 12:00	09.25.2020 12:00			
	<i>Analyzed:</i>	09.25.2020 14:01	09.25.2020 14:21	09.25.2020 14:42			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2	<50.0 50.0	<50.1 50.1			
Diesel Range Organics (DRO)		<50.2 50.2	<50.0 50.0	<50.1 50.1			
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.0 50.0	<50.1 50.1			
Total GRO-DRO		<50.2 50.2	<50.0 50.0	<50.1 50.1			
Total TPH		<50.2 50.2	<50.0 50.0	<50.1 50.1			

BRL - Below Reporting Limit

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

Jessica Kramer



Analytical Report 673497

for

LT Environmental, Inc.

Project Manager: Dan Moir

PLU 442-443 SWD Battery

012920122

09.28.2020

Collected By: Client

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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



09.28.2020

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

Reference: Eurofins Xenco, LLC Report No(s): **673497**
PLU 442-443 SWD Battery
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 673497. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 673497 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

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 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS02A	S	09.24.2020 09:44	3 ft	673497-001
FS03	S	09.24.2020 09:46	1 ft	673497-002
SW01	S	09.24.2020 10:03	0 - 3 ft	673497-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 442-443 SWD Battery

Project ID: 012920122
Work Order Number(s): 673497

Report Date: 09.28.2020
Date Received: 09.24.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3138163 TPH by SW8015 Mod

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

Samples affected are: 673497-002.



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: FS02A	Matrix: Soil	Date Received: 09.24.2020 12:22
Lab Sample Id: 673497-001	Date Collected: 09.24.2020 09:44	Sample Depth: 3 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.24.2020 16:44	Basis: Wet Weight
Seq Number: 3138103		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	9.96	mg/kg	09.24.2020 23:35		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 09.25.2020 10:30	Basis: Wet Weight
Seq Number: 3138163		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	09.25.2020 14:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	09.25.2020 14:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	09.25.2020 14:01	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	09.25.2020 14:01	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	09.25.2020 14:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	09.25.2020 14:01	
o-Terphenyl	84-15-1	118	%	70-135	09.25.2020 14:01	



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: FS02A	Matrix: Soil	Date Received: 09.24.2020 12:22
Lab Sample Id: 673497-001	Date Collected: 09.24.2020 09:44	Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.25.2020 15:39	Basis: Wet Weight
Seq Number: 3138238		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.26.2020 09:31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.26.2020 09:31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.26.2020 09:31	
4-Bromofluorobenzene	460-00-4	129	%	70-130	09.26.2020 09:31	



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: FS03	Matrix: Soil	Date Received: 09.24.2020 12:22
Lab Sample Id: 673497-002	Date Collected: 09.24.2020 09:46	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.24.2020 16:44	Basis: Wet Weight
Seq Number: 3138103		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	87.4	10.0	mg/kg	09.24.2020 23:41		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DTH		% Moisture:
Analyst: DTH	Date Prep: 09.25.2020 12:00	Basis: Wet Weight
Seq Number: 3138163		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	09.25.2020 14:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	09.25.2020 14:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.25.2020 14:21	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	09.25.2020 14:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.25.2020 14:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	143	%	70-135	09.25.2020 14:21	**
o-Terphenyl	84-15-1	126	%	70-135	09.25.2020 14:21	



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: FS03	Matrix: Soil	Date Received: 09.24.2020 12:22
Lab Sample Id: 673497-002	Date Collected: 09.24.2020 09:46	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.25.2020 15:39	Basis: Wet Weight
Seq Number: 3138238		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.26.2020 09:53	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.26.2020 09:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	09.26.2020 09:53	
1,4-Difluorobenzene	540-36-3	107	%	70-130	09.26.2020 09:53	



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: **SW01** Matrix: Soil Date Received: 09.24.2020 12:22
 Lab Sample Id: 673497-003 Date Collected: 09.24.2020 10:03 Sample Depth: 0 - 3 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 09.24.2020 16:44 Basis: Wet Weight
 Seq Number: 3138103

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	378	10.0	mg/kg	09.24.2020 23:47		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 09.25.2020 12:00 Basis: Wet Weight
 Seq Number: 3138163

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	09.25.2020 14:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	09.25.2020 14:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	09.25.2020 14:42	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	09.25.2020 14:42	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	09.25.2020 14:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	09.25.2020 14:42	
o-Terphenyl	84-15-1	114	%	70-135	09.25.2020 14:42	



Certificate of Analytical Results 673497

LT Environmental, Inc., Arvada, CO

PLU 442-443 SWD Battery

Sample Id: SW01	Matrix: Soil	Date Received: 09.24.2020 12:22
Lab Sample Id: 673497-003	Date Collected: 09.24.2020 10:03	Sample Depth: 0 - 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5035A
Tech: MAB		% Moisture:
Analyst: MAB	Date Prep: 09.25.2020 15:39	Basis: Wet Weight
Seq Number: 3138238		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.26.2020 10:16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.26.2020 10:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	09.26.2020 10:16	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.26.2020 10:16	



LT Environmental, Inc.
 PLU 442-443 SWD Battery

Analytical Method: Chloride by EPA 300

Seq Number: 3138103
 MB Sample Id: 7712045-1-BLK

Matrix: Solid
 LCS Sample Id: 7712045-1-BKS

Prep Method: E300P
 Date Prep: 09.24.2020
 LCSD Sample Id: 7712045-1-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	256	102	256	102	90-110	0	20	mg/kg	09.24.2020 21:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3138103
 Parent Sample Id: 673488-006

Matrix: Soil
 MS Sample Id: 673488-006 S

Prep Method: E300P
 Date Prep: 09.24.2020
 MSD Sample Id: 673488-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1260	199	1450	95	1450	95	90-110	0	20	mg/kg	09.24.2020 21:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3138103
 Parent Sample Id: 673488-016

Matrix: Soil
 MS Sample Id: 673488-016 S

Prep Method: E300P
 Date Prep: 09.24.2020
 MSD Sample Id: 673488-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3780	202	4000	109	3970	94	90-110	1	20	mg/kg	09.24.2020 22:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138163
 MB Sample Id: 7712083-1-BLK

Matrix: Solid
 LCS Sample Id: 7712083-1-BKS

Prep Method: SW8015P
 Date Prep: 09.25.2020
 LCSD Sample Id: 7712083-1-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	1250	125	974	97	70-135	25	35	mg/kg	09.25.2020 10:19	
Diesel Range Organics (DRO)	<50.0	1000	913	91	956	96	70-135	5	35	mg/kg	09.25.2020 10:19	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		134		133		70-135	%	09.25.2020 10:19
o-Terphenyl	92		126		123		70-135	%	09.25.2020 10:19

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138163

Matrix: Solid
 MB Sample Id: 7712083-1-BLK

Prep Method: SW8015P
 Date Prep: 09.25.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	09.25.2020 09:59	

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

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

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

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



LT Environmental, Inc.
 PLU 442-443 SWD Battery

Analytical Method: TPH by SW8015 Mod

Seq Number: 3138163
 Parent Sample Id: 673493-001

Matrix: Soil
 MS Sample Id: 673493-001 S

Prep Method: SW8015P
 Date Prep: 09.25.2020
 MSD Sample Id: 673493-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.8	996	998	100	981	98	70-135	2	35	mg/kg	09.25.2020 11:19	
Diesel Range Organics (DRO)	<49.8	996	992	100	955	96	70-135	4	35	mg/kg	09.25.2020 11:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	134		130		70-135	%	09.25.2020 11:19
o-Terphenyl	130		125		70-135	%	09.25.2020 11:19

Analytical Method: BTEX by EPA 8021B

Seq Number: 3138238
 MB Sample Id: 7712176-1-BLK

Matrix: Solid
 LCS Sample Id: 7712176-1-BKS

Prep Method: SW5035A
 Date Prep: 09.25.2020
 LCSD Sample Id: 7712176-1-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	0.0987	99	0.103	103	70-130	4	35	mg/kg	09.26.2020 02:44	
Toluene	<0.00200	0.100	0.0947	95	0.0973	97	70-130	3	35	mg/kg	09.26.2020 02:44	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.101	101	71-129	3	35	mg/kg	09.26.2020 02:44	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.201	101	70-135	2	35	mg/kg	09.26.2020 02:44	
o-Xylene	<0.00200	0.100	0.0986	99	0.0988	99	71-133	0	35	mg/kg	09.26.2020 02:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		102		70-130	%	09.26.2020 02:44
4-Bromofluorobenzene	115		109		109		70-130	%	09.26.2020 02:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3138238
 Parent Sample Id: 673428-008

Matrix: Soil
 MS Sample Id: 673428-008 S

Prep Method: SW5035A
 Date Prep: 09.25.2020
 MSD Sample Id: 673428-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.105	105	0.0983	98	70-130	7	35	mg/kg	09.26.2020 03:29	
Toluene	<0.00201	0.100	0.0978	98	0.0878	88	70-130	11	35	mg/kg	09.26.2020 03:29	
Ethylbenzene	<0.00201	0.100	0.105	105	0.0900	90	71-129	15	35	mg/kg	09.26.2020 03:29	
m,p-Xylenes	<0.00402	0.201	0.210	104	0.180	90	70-135	15	35	mg/kg	09.26.2020 03:29	
o-Xylene	<0.00201	0.100	0.104	104	0.0904	90	71-133	14	35	mg/kg	09.26.2020 03:29	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		96		70-130	%	09.26.2020 03:29
4-Bromofluorobenzene	114		111		70-130	%	09.26.2020 03:29

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

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

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

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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09.24.2020 12.22.00 PM

Work Order #: 673497

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by: Cloe Clifton Date: 09.24.2020
 Cloe Clifton

Checklist reviewed by: Jessica Kramer Date: 09.25.2020
 Jessica Kramer

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 1625 N. French Dr., Hobbs, NM 88240
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 811 S. First St., Artesia, NM 88210
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District IV
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 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 11276

CONDITIONS OF APPROVAL

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Building #5 Midland, TX79707	OGRID: 5380	Action Number: 11276	Action Type: C-141
OCD Reviewer chensley	Condition None		