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LT Environmental, Inc.
820 Megan Avenue, Unit B
Rifle, Colorado 81650
970.285.9985

June 24, 2020

Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210

RE: Remediation Work Plan and Variance Request
WPX Energy Permian, LLC
Remediation Permit Number 2RP-5628
Swearingen #001
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of WPX Energy Permian, LLC (WPX), is pleased to present the following Remediation Work Plan and Variance Request detailing soil sampling activities and proposed remediation at the Swearingen #001 well pad (Site) located in Unit J, Section 4, Township 23 South, Range 28 East, Eddy County, New Mexico, as depicted on Figure 1.

BACKGROUND

The release was discovered on August 23, 2019 after a failed injection line caused the release of 20 barrels (bbls) of produced water to the well pad surface. Approximately 15 bbls of fluid were recovered immediately and returned to disposal. The release affected approximately 8,937 square feet of the well pad surface. The release footprint was mapped (Figure 2) using a Global Positioning System (GPS). WPX reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on August 28, 2019 and was subsequently assigned Remediation Permit (RP) Number 2RP-5628 (Attachment 1).

SITE CHARACTERIZATION

LTE determined closure criteria 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 less than 50 feet below ground surface (bgs) based on site assessment activities conducted in April 2020. The nearest permitted water well with depth to water data is C 00800, located approximately 3,800 feet southeast of the Site. Water well C 00800 has a reported depth to water of 30 feet bgs. The closest significant watercourse to the Site is the Pecos River located approximately 860 feet south of the Site. The Site is greater than 300 feet from any occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-

year floodplain or overlying a subsurface mine. The Site is located in a medium-potential karst area. Potential receptors identified during site characterization are displayed in Figure 1.

CLOSURE CRITERIA

Based on these criteria, the following NMOCD Table 1 Closure Criteria apply:

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

INITIAL SOIL SAMPLING

On August 27, 2019, LTE collected two surface soil samples from the release area (SS01 and SS02). The soil samples were field screened for volatile aromatic hydrocarbons using a calibrated photo-ionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler, and method of analysis and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) to Xenco Laboratories in Midland, Texas, under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-motor oil range organics (MRO) by USEPA Method 8015M, and chloride by USEPA Method 300.0.

Laboratory analytical and field screening results of soil samples indicated chloride concentrations exceeded the Closure Criteria within the release area, warranting additional delineation of the impacts. Laboratory analytical results and soil sample locations are presented on Figure 2.

SUBSURFACE INVESTIGATION

From August 29 to December 13, 2019, LTE oversaw the advancement of nine potholes (PH01 through PH09) and one background soil boring (BG01) at the Site. Potholes where advanced within the release footprint to characterize impacted soil, immediately adjacent to the release footprint to delineate the release, and between 50 feet to 100 feet away from the release to investigate background chloride concentrations. Potholes ranged in depth from 0.5 feet bgs to 9 feet bgs. Excluding soil samples PH01 through PH03, two soil samples were collected from each soil boring: the most impacted depth based on field screening results and the terminus of the borehole. The soil samples were field screened for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. Due to BTEX and TPH concentrations for preliminary soil samples indicating concentrations below the Closure Criteria, only chloride concentrations for soil samples PH01 through PH04 were analyzed. Remaining delineation soil

samples collected outside the release extent (PH05 through PH09) were analyzed for BTEX, TPH and chloride. All soil samples were collected and handled as previously described.

On April 1 and 2, 2020, LTE directed the advancement of six soil borings (SB01 through SB06) to continue the characterization and delineation of the identified chloride impacts and obtain additional background data. Using hollow stem drilling technology, the soil borings were advanced to depths ranging from 12.2 feet bgs to 25 feet bgs. Soil boring advancement was directed by an LTE geologist who inspected soil samples for the presence or absence of petroleum hydrocarbon odor and/or staining. The soil was characterized by visually inspecting soil samples and field screening the soil headspace using a calibrated PID to monitor for the presence of volatile organic vapors and Hach® chloride QuanTab® test strips for chloride. All soil samples were collected, handled, and analyzed for BTEX, TPH and chloride.

During the advancement of soil boring SB01, groundwater was encountered at approximately 20 feet bgs. Temporary well casing was installed in SB01 to allow the groundwater table to equilibrate. After approximately 24 hours, the groundwater table was measured in SB01 at approximately 19.8 feet bgs. All soil borings were abandoned by filling the boreholes with hydrated bentonite. Soil boring and pothole locations are depicted on Figure 3. All Lithologic Soil Sampling Logs are included as Attachment 2.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results of delineation soil samples utilizing heavy equipment indicated chloride concentrations exceeding the Closure Criteria ranging from 846 mg/kg in soil sample PH04A collected at 4 feet bgs to 15,900 mg/kg in PH01 collected from 1.5 feet bgs. The soil sample collected from BG01 at 3 feet bgs contained 1,300 mg/kg of chloride.

Laboratory analytical results of delineation soil samples utilizing a hollow stem drill rig indicate chloride concentrations ranging from 340 mg/kg in soil sample SB05 to 4,420 mg/kg in soil sample SB06.

Laboratory analytical results of all soil samples indicate concentrations of BTEX and TPH that are either below the laboratory detection limit or are compliant with Closure Criteria. Laboratory analytical results are summarized in Table 1. The complete laboratory analytical reports are included as Attachment 3.

BACKGROUND CHLORIDE CONCENTRATIONS

Soil boring BG01 was collected in an undisturbed area off pad to investigate the potential for naturally occurring elevated chloride in subsurface soils. Additional potholes and soil borings were installed at a range of locations on pad and off pad and sampled at different depths to comprehensively characterize naturally occurring chloride in subsurface soils. The potholes and soil borings were no closer than 50 feet but no farther than 100 feet from the lateral and

horizontal extents of the release and representative of the entire horizontal and vertical extent of the release as recommended in NMOCD's Procedures for Implementation of the Spill Rule (Guidelines).

Background potholes and soil borings include BG01, PH05, PH06, PH07, PH08, and PH09. Samples collected from these borings range from 1 foot bgs to 9 feet bgs. Laboratory analytical results from these samples indicate background chloride concentrations in this area are variable with a maximum background chloride concentration of 2,510 mg/kg as documented in PH07A at 6 feet bgs. The background sample concentrations are listed in Table 1.

BACKGROUND DELINEATION INTERPRETATION

Based on naturally occurring elevated chloride conditions, impacted soil was identified as all soil containing chloride concentrations exceeding 2,510 mg/kg. This includes impacted soil within the release footprint represented by soil samples PH01, PH02, and PH03 and shallow soil to the east of the release footprint at soil boring SB06.

PROPOSED WORK PLAN

An estimated 1,800 cubic yards of impacted soil remain in place, assuming a maximum depth of 9 feet bgs in the release footprint based on soil samples collected from potholes PH01, PH02, PH03, and 3 feet bgs off pad in soil boring SB06. WPX plans to complete remediation of the Site through excavation of all remaining impacted soil containing chloride concentrations above the observed background concentration (Figure 3). Excavation activities will be directed by field screening soil samples for volatile aromatic hydrocarbons using a PID and chloride using Hach® chloride QuanTab® test strips. When field screening measurements indicate the removal of impacted soil, floor and sidewall composite soil samples be collected from the excavation. All excavated soil will be transported offsite to an approved facility for disposal.

SAMPLE VARIANCE REQUEST

If confirmation soil samples are to be collected for every 200 square feet, it is estimated that over 50 soil samples would need to be collected and analyzed. WPX is requesting to collect soil samples every 500 square feet, reducing the total number of samples to approximately 21. Soil samples will be submitted for laboratory analysis of chloride by USEPA Method 300.0. Due to the lack of BTEX and TPH concentrations observed in all soil samples collected to date, WPX is requesting this reduced analyte list.

PROPOSED SCHEDULE

WPX will complete these remedial activities and provide a report detailing all activities with a request for closure within 90 days of the date of approval of this work plan by NMOCD. An updated NMOCD Form C-141 is included in Attachment 1

If you have any questions or comments, please do not hesitate to contact Mr. Chris McKisson at (970) 285-9985 or cmckisson@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Chris McKisson
Project Environmental Scientist

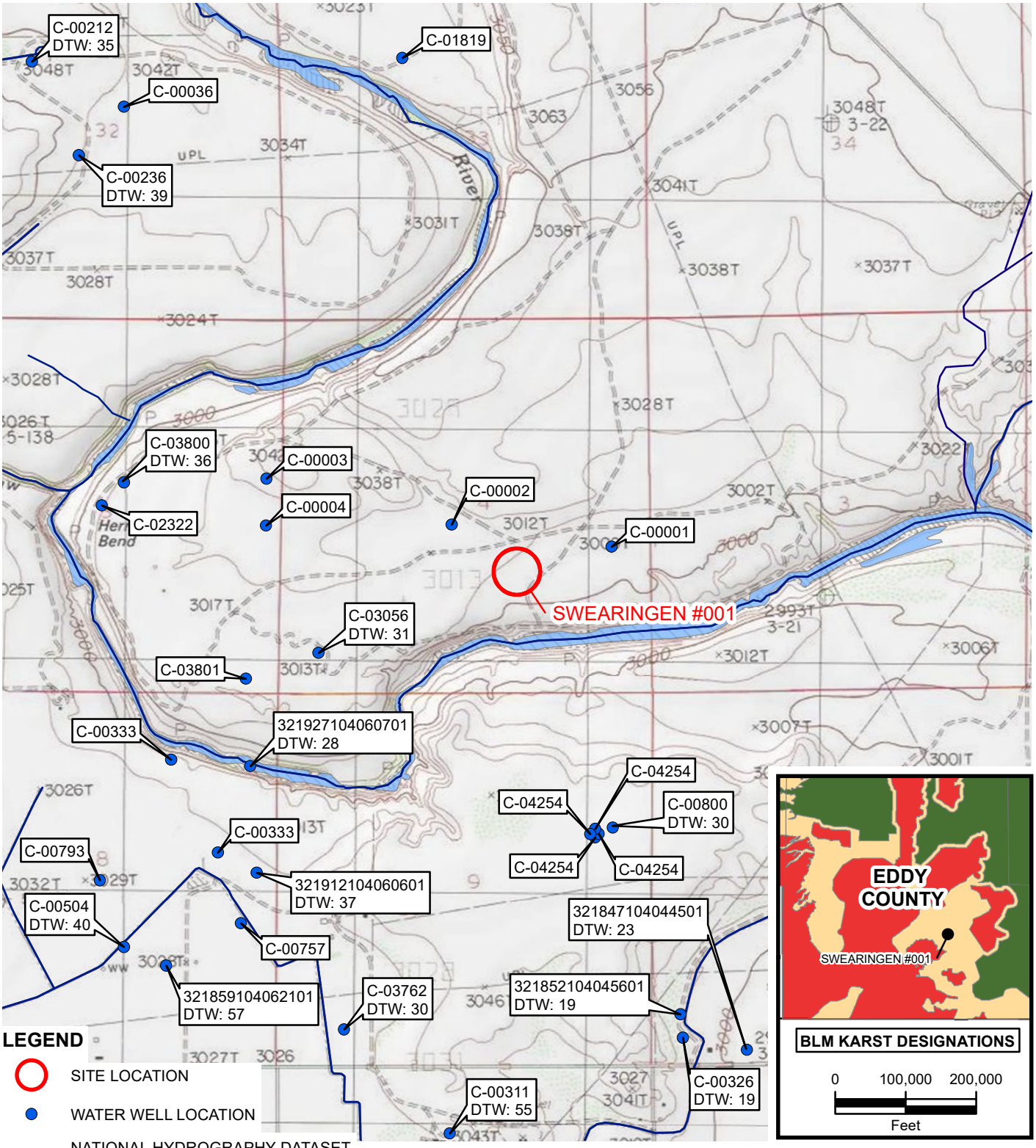
Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Jim Raley, WPX

Attachments:

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Form C-141
Attachment 2	Lithologic/Soil Sampling Logs
Attachment 3	Laboratory Analytical Reports

FIGURES



NOTE: REMEDIATION PERMIT NUMBER NOT ASSIGNED
DTW: DEPTH TO WATER IN FEET
BLM: BUREAU OF LAND MANAGEMENT

FIGURE 1
SITE LOCATION MAP
SWEARINGEN #001
UNIT J SEC 4 T23S R28E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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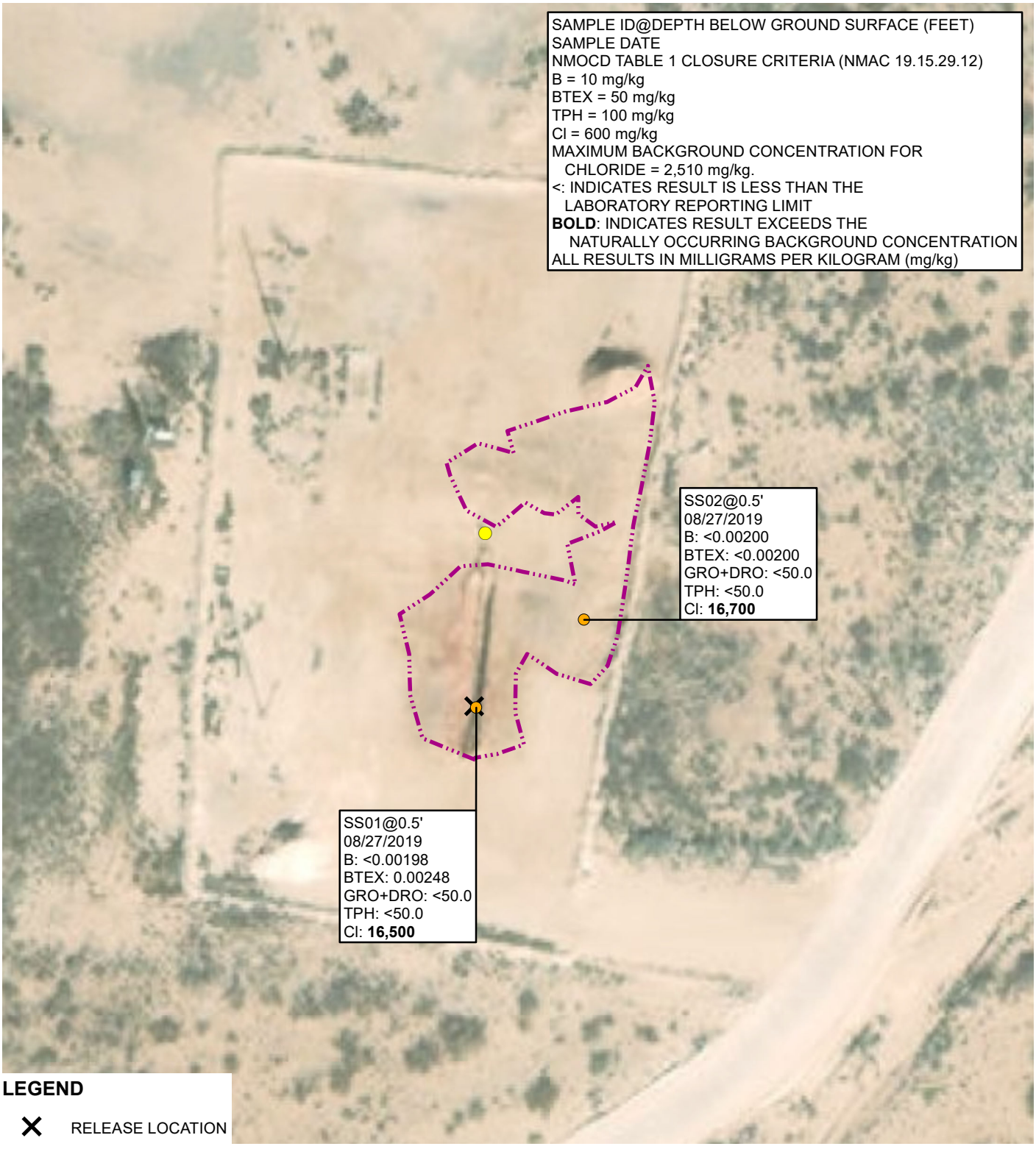

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION

FIGURE 2
PRELIMINARY SOIL SAMPLE LOCATIONS
SWEARINGEN #001
UNIT J SEC 4 T23S R28E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

P:\WPX\GIS\MXD\034819038_SWEARINGEN #1 SWD\034819038_FIG02_PRELIMINARY_2019.mxd

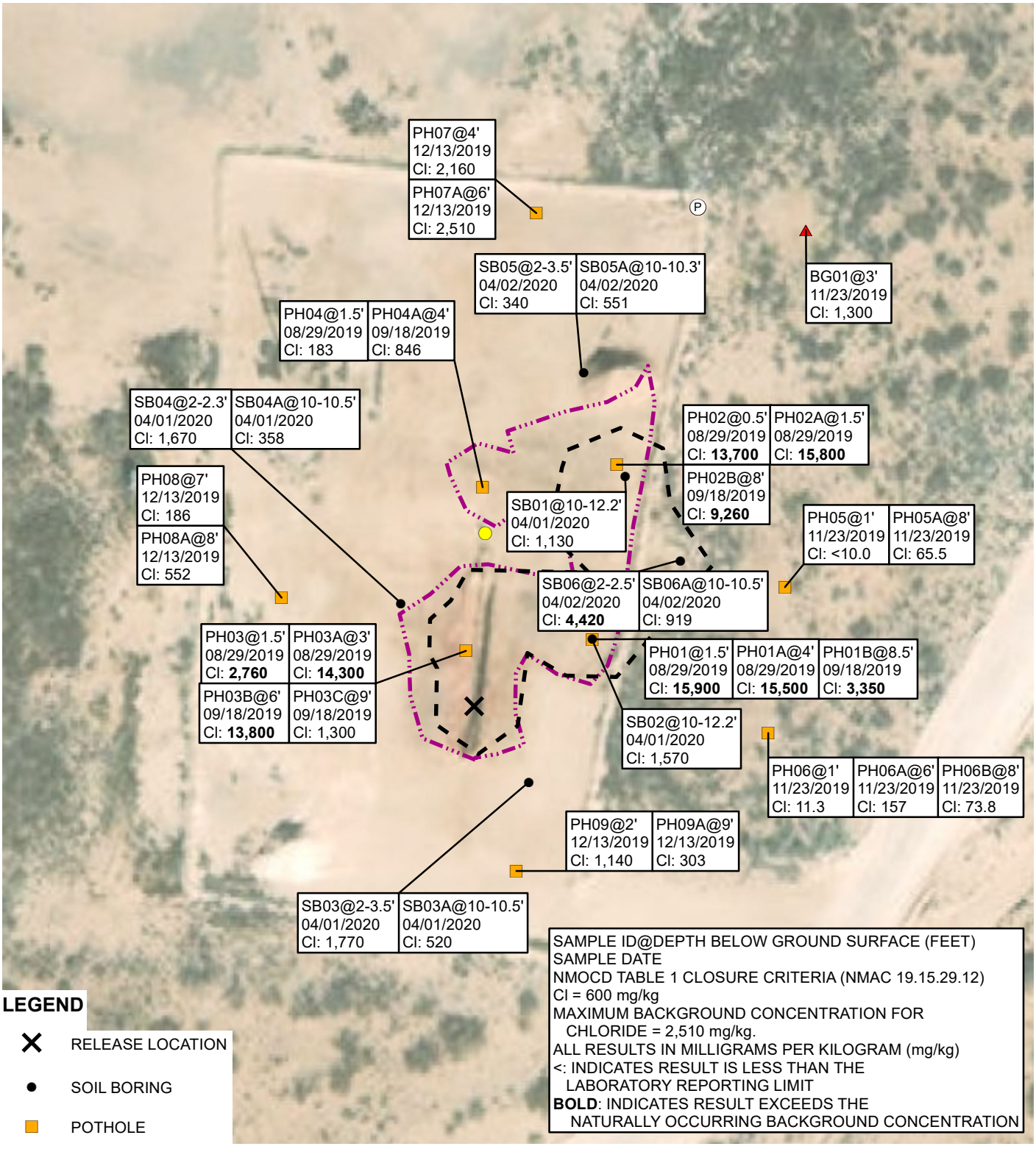

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
SWEARINGEN #001
UNIT J SEC 4 T23S R28E
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, LLC.

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

SWEARINGEN #001
REMEDIATION PERMIT NUMBER 2RP-5628
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	Application
BACKGROUND SAMPLES														
BG01	3	11/23/2019	-	-	-	-	-	-	-	-	-	-	1,300	In-situ
PH05	1	11/23/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.2	<50.2	<50.2	<50.2	<50.2	<10.0	In-situ
PH05A	8	11/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.3	<50.3	<50.3	<50.3	<50.3	65.5	In-situ
PH06	1	11/23/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<50.1	<50.1	<50.1	<50.1	<50.1	11.3	In-situ
PH06A	6	11/23/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	157	In-situ
PH06B	8	11/23/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	73.8	In-situ
PH07	4	12/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	2,160	In-situ
PH07A	6	12/13/2019	<0.00196	<0.00196	<0.00196	<0.00196	<0.00196	<50.0	<50.0	<50.0	<50.0	<50.0	2,510	In-situ
PH08	7	12/13/2019	<0.00196	<0.00196	<0.00196	<0.00196	<0.00196	<50.2	<50.2	<50.2	<50.2	<50.2	186	In-situ
PH08A	8	12/13/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	552	In-situ
PH09	2	12/13/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.9	<49.9	<49.9	<49.9	<49.9	1,140	In-situ
PH09A	9	12/13/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	303	In-situ
DELINEATION SOIL SAMPLES														
SS01	0.5	08/27/2019	<0.00198	0.00248	<0.00198	<0.00198	0.00248	<50.0	<50.0	<50.0	<50.0	<50.0	**16,500**	In-situ
SS02	0.5	08/27/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	**16,700**	In-situ
PH01	1.5	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**15,900**	In-situ
PH01A	4	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**15,500**	In-situ
PH01B	8.5	09/18/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3,350**	In-situ
PH02	0.5	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13,700**	In-situ
PH02A	1.5	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**15,800**	In-situ
PH02B	8	09/18/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**9,260**	In-situ
PH03	1.5	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2,760**	In-situ
PH03A	3	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**14,300**	In-situ
PH03B	6	09/18/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13,800**	In-situ

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TABLE 1
SOIL ANALYTICAL RESULTS

SWEARINGEN #001
REMEDIATION PERMIT NUMBER 2RP-5628
EDDY COUNTY, NEW MEXICO
WPX ENERGY PERMIAN, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	Application
PH03C	9	09/18/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,300	In-situ
PH04	1.5	08/29/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	183	In-situ
PH04A	4	09/18/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	846	In-situ
SB01	10 - 12.2	04/01/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.1	<50.1	<50.1	<50.1	<50.1	1,130	In-situ
SB02	10 - 12.2	04/01/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	1,570	In-situ
SB03	2 - 3.5	04/01/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.3	<50.3	<50.3	<50.3	<50.3	1,770	In-situ
SB03A	10 - 10.5	04/01/2020	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<50.3	<50.3	<50.3	<50.3	<50.3	520	In-situ
SB04	2 - 2.3	04/01/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,670	In-situ
SB04A	10 - 10.5	04/01/2020	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.1	<50.1	<50.1	<50.1	<50.1	358	In-situ
SB05	2 - 3.5	04/02/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	340	In-situ
SB05A	10 - 10.3	04/02/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.1	<50.1	<50.1	<50.1	<50.1	551	In-situ
SB06	2 - 2.5	04/02/2020	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	**4,420**	In-situ
SB06A	10 - 10.5	04/02/2020	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	919	In-situ
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**	
Maximum Background Concentration			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	**2,510**	

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

MRO - motor oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NA - not analyzed

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< - indicates result is below laboratory reporting limits

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

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ATTACHMENT 1: FORM C-141

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	NAB1927155176
District RP	2RP-5628
Facility ID	
Application ID	pAB1927154850

Release Notification CLXJT-190904-C-1410

Responsible Party

Responsible Party	WPX Energy, Inc.	OGRID	246289
Contact Name	Jim Raley	Contact Telephone	575-689-7597
Contact email	james.raley@wpxenergy.com	Incident # *(assigned by OCD)*	NAB1927155176
Contact mailing address 5315 Buena Vista Dr., Carlsbad, NM 88220			

Location of Release Source

Latitude 32.3318481 Longitude -104.090187
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Swearingen #001	Site Type SWD
Date Release Discovered 8/23/2019	API# *(if applicable) 30-015-23816*

Unit Letter	Section	Township	Range	County
J	04	23S	28E	Eddy

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name: Anna F. Boyles*)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 20	Volume Recovered (bbls) 15
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release: Failure of injection line allowed release of 20 bbls of produced water to well pad surface. 15 bbls was recovered and returned to disposal. Line to be repaired.

$$bbl\ estimate = \frac{saturated\ soil\ volume\ (ft^3)}{4.21\left(\frac{ft^3}{bbl\ equivalent}\right)} * estimated\ soil\ porosity(\%) + \text{recovered fluids (bbl)}$$

Form C-141
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	NAB1927155176
District RP	2RP-5628
Facility ID	
Application ID	pAB1927154850

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

Initial Response

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

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

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

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

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

Printed Name: James Raley Title: Environmental Specialist

Signature: Date: 8/28/2019

email: james.raley@wpxenergy.com Telephone: 575-689-7597

OCD Only

Received by: Amalia Bustamante Date: 9/28/2019

Incident ID	NAB1927155176
District RP	**2RP-5628**
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	**20** (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

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

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

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

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

Form C-141
Page 4

State of New Mexico
Oil Conservation Division

Incident ID	NAB1927155176
District RP	**2RP-5628**
Facility ID	
Application ID	

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

Printed Name: **Jim Raley** Title: **Environmental Specialist**

Signature: Jim Raley Date: **7/13/2020**

email: **James.Raley@wpxenergy.com** Telephone: **575-689-7597**

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	NAB1927155176
District RP	**2RP-5628**
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: **Jim Raley** Title: **Environmental Specialist**

Signature: Jim Raley Date: **7/13/2020**

email: **James.Raley@wpxenergy.com** Telephone: **575-689-7597**

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

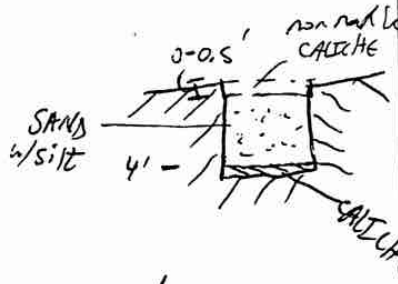
ATTACHMENT 2: LITHOLOGIC SOIL SAMPLING LOGS

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

Identifier: PH1	Date: 08/29/2019
Project Name: Swaringer ISWD	RP Number:
Logged By: L. Lambuth	Method: backhoe
Hole Diameter: 1'	Total Depth: 4'
Field Screening: PID, chlorides	
Lat/Long: 32.33173 S, -104.08996	
Comments: delineation	

LITHOLOGIC / SOIL SAMPLING LOG

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
damp	16300	4500	Y		0 1 1.5' 2 3			SAND w/ silt, brown, odor ~gravel fines
damp	10312 (7,0)	~95	N		(4) 5			CALICHE, w/ mix sand, ~~75% sand~~ odor, refusal backhoe - buffer bar ~~can't break caliche~~
					6 7 8 9 10 11 12			deepest depth



LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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Identifier: PH-2	Date: 08/29/2019
Project Name: Sweatnyer 15WD	RP Number:
Logged By: L. Lambert	Method: backhoe
Hole Diameter: 1'	Total Depth: 1.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.331939, -104.089882
Field Screening: PID, chlorides
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			Graded excavation
					0.5'			odor, SAND w/ silt
dry	14760 7.8	335.2	N		1.5'			odor, SAND w/ silt (20/80)
					2			AR (Auger refusal)
					3			deepest depth
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH03	Date: 08/24/19
Project Name: Shoringer 1 SWD	RP Number:
Logged By: L. Lambert	Method: backhoe
Hole Diameter: 1'	Total Depth: 3.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: 32.33172, -104.09009
Field Screening: PID, chlorides
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
Saturated	2760 (3.8)	9.6			0 1 1.5' 2 3			SAND w/ silt
Saturated	15,840 (7.8)	53.6			3.5' 4 5 6 7 8 9 10 11 12			CALICHE layer deepest depth

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Identifier	Date
PH-4	05/29/2019
Project Name: Sweetheart 1 SWD	RP Number
Logged By: L. Lombardo	Method: Hand Auger / Soil
Lat/Long: 32.33919, -104.090066	Field Screening: PID, Chlorides
Hole Diameter: 1'	Total Depth: 1.5'

Comments: dehydration

LITHOLOGIC / SOIL SAMPLING LOG

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil Rock Type	Lithology/Remarks
	<10	5.8			0			
					1			
					1.5'			1.5' SAND silty!
					2			Nodor
					3			AR large rock
					4			deepest depth
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

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Identifier: PH01	Date: 09/18/2019
Project Name: Swearingen	RP Number: 2RP
Logged By: L. Lambach	Method: backhoe
Hole Diameter: 1'	Total Depth: 8.5'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:
Field Screening: chlorides
Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0–4			from previous
dry	4.2k				6.5'			SAND, course, river rocks, grey, yellow, tan, red
								Nodor 9 1/8" → 5" brown diameter, smooth
	7.6k			PH01 8.5'	8.5'			SAA
					9–12			backhoe reach deepest depth

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Identifier: PH-2	Date: 09/18/2019
Project Name: Swearingen	RP Number: 2RP
Logged By: L. Laumbach	Method: backhoe
Lat/Long:	Field Screening: chlorides
Hole Diameter: 1'	Total Depth: 8'

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			
—	—	—	—		2	—	—	From previous potholing on
	>>2492							
	4.92	✓	N		3'			SAND, coarse, rocks tan/brown w/ white, grey, red, brown
					4			
					5			
	5316							
	5.62	✓	N		6			SAA
					7			
dry	5392							
	6.42	✓	N	PH02	8			SAA color
					9			backhoe reach deepest depth
					10			
					11			
					12			

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Identifier: PH03C	Date: 09/18/2019
Project Name: Sweeney	RP Number: 2RP
Logged By: L. Lambuth	Method: backhoe
Lat/Long:	Field Screening: chlorides
Hole Diameter: 1'	Total Depth:

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			From previous pothole on
					2			
dry	6.8h		N		3			SAND, silt, w/ 1/4" -> 1/2" rocks (diameter) No odor
dry	8776				4			
					5			
dry	10496		N		6			
	7.2h				7			
					8			
			N		9			
					10			
					11			
					12			

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Identifier: ~~PH04~~ PH04	Date: 09/18/2019
Project Name: Swearingen	RP Number: 2RP
Logged By: L. Laumbach	Method: backhoe
Hole Diameter: 1'	Total Depth: 4'
Field Screening: chlorides	
Lat/Long:	
Comments:	

LITHOLOGIC / SOIL SAMPLING LOG

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
					1			from previous pothlg on
					2			
dry	4.6R 836		N		3'	8:55		CALICHE, dry, N odor, SAND mix
dry	3.4				4'			CALICHE, dry
					5			deepest depth
					6			
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH05	Date: 11/23/19
		Project Name: Swearingen #1 SWD	RP Number: 2RP-5628
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Back Hoe
Lat/Long: 32.33179614N, 104.08965098W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 8 ft
Comments: Chloride concetrations do not include 40% correction factor			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth (ft)	Soil/Rock Type	Lithology/Remarks
					0			
DRY	<120	0	NO	PH05	1	1	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		3	3	Caliche	Tan well-cemented, caliche with poorly sorted, subrounded carbonate casts; well-graded sandy matrix
					4			
DRY	<120	0	NO			4.5	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					5			
DRY	<120	0	NO		6	6	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					7			
DRY	<120	0	NO	PH08A	8	8	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					9			Back Hoe Refusal
					10			
					11			
					12			

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Identifier: PH06	Date: 11/23/19
Project Name: Swearingen #1 SWD	RP Number: 2RP-5628

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: Anna Byers	Method: Back Hoe		
Lat/Long: 32.33162557N, 104.08967438W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 8 ft

Comments: Chloride concetrations do not include 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth (ft)	Soil/Rock Type	Lithology/Remarks
					0			
DRY	<120	0	NO	PH06	1	1	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		3	3	Caliche	Tan well-cemented, caliche with poorly sorted, subrounded carbonate casts; well-graded sandy matrix
DRY	120	0	NO		4	4	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					5			
DRY	172	0	NO	PH06A	6	6	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					7			
DRY	<120	0	NO	PH06B	8	8	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					9			Back Hoe Refusal
					10			
					11			
					12			

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		Identifier: PH07	Date: 12/13/19
		Project Name: Swearingen #1 SWD	RP Number: 2RP-5628
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Back Hoe
Lat/Long: 32.33223337N, 104.08999152W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 6 ft

Comments: Chloride concetrations do not include 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth (ft)	Soil/Rock Type	Lithology/Remarks
					0			
DRY	960	0	NO		1	1	SP	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	960	0	NO		2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt and gravel; non-plastic, root fragments
DRY	1480	0	NO		3	3	SP-SM	Brown, compact poorly-graded sand (m.) with silt and gravel; non-plastic, root fragments
DRY	1820	0	NO	PH07	4	4	SP-SM	Brown, compact poorly-graded sand (m.) with silt and gravel; non-plastic, root fragments
					5			
DRY	2088	0	NO	PH07A	6	6	SP-SM	Brown, compact poorly-graded sand (m.) with silt and gravel; non-plastic, root fragments
								Back Hoe Refusal
					7			
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH08	Date: 12/13/19
		Project Name: Swearingen #1 SWD	RP Number: 2RP-5628
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Back Hoe
Lat/Long: 32.33178504N, 104.09034302W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 8 ft
Comments: Chloride concetrations do not include 40% correction factor			

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth (ft)	Soil/Rock Type	Lithology/Remarks
					0			
DRY	<120	0	NO		1	1	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	<120	0	NO		3	3	Caliche	Tan well-cemented, caliche with poorly sorted, subrounded carbonate casts; well-graded sandy matrix
DRY	<120	0	NO		4	4	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	<120	0	NO		5	5	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	<120	0	NO		6	6	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	204	0	NO	PH08	7	7	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	388	0	NO	PH08A	8	8	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					9			Back Hoe Refusal
					10			
					11			
					12			

LT Environmental, Inc. 508 West Stevens Street Carlsbad, New Mexico 88220 Compliance · Engineering · Remediation		Identifier: PH09	Date: 12/13/19
		Project Name: Swearingen #1 SWD	RP Number: 2RP-5628
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Back Hoe
Lat/Long: 32.3314652N, 104.0900213W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 9 ft

Comments: Chloride concetrations do not include 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth (ft)	Soil/Rock Type	Lithology/Remarks
					0			
DRY	268	0	NO		1	1	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	756	0	NO	PH09	2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	756	0	NO		3	3	Caliche	Tan well-cemented, caliche with poorly sorted, subrounded carbonate casts; well-graded sandy matrix
DRY	388	0	NO		4	4	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	432	0	NO		5	5	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	480	0	NO		6	6	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	432	0	NO		7	7	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	432	0	NO		8	8	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
DRY	304	0	NO	PH09A	9	9	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					10			Back Hoe Refusal
					11			
					12			

LT Environmental, Inc.
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		Identifier: BG01	Date: 11/23/19
		Project Name: Swearingen #1 SWD	RP Number: 2RP-5628
LITHOLOGIC / SOIL SAMPLING LOG		Logged By: Anna Byers	Method: Back Hoe
Lat/Long: 32.33221282N, 104.08962102W	Field Screening: PID & HACH Chloride Test Strips	Hole Diameter: N/A	Total Depth: 6 ft

Comments: Chloride concetrations do not include 40% correction factor

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
DRY	480	0	NO		1	1	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	820	0	NO		2	2	SP-SM	Brown, compact poorly-graded sand (m.) with silt; non-plastic, root fragments
DRY	1200	0	NO	BG01	3	3	Caliche	Tan well-cemented, caliche with poorly sorted, subrounded carbonate casts; well-graded sandy matrix
DRY	1116	0	NO		4	4	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					5			
DRY	480	0	NO		6	6	SW-SM	Brown, compact well-graded sand (m.) with silt and gravel to cobble sized clasts (non-uniform, subrounded); no odor, non-plastic
					7			Back Hoe Refusal
					8			
					9			
					10			
					11			
					12			

LT Environmental, Inc.
508 West Stevens Street
Carlsbad, New Mexico 88220
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BH or PH Name: SB01 (@PH02)	Date: 4/1/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: AByers	Method: Drilling Hollow Stem Auger
Lat/Long: 32.33192525, -104.08987026	Field Screening: Cl- HACH Strips; Chloride, PID 4:1 Dilution
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 25'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: 0 - 8' bgs previously logged in PH02, temporary well casing set

0 - blank casing (0 - 15' bgs)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						1		
						2		
						3		
						4		
						5		
						6		
						7		
						8		
						9		
						10		→ 50 blows, 2"
D	664	Ø	N	SB01	10-12.2'	11	sdy cgl / cgl sst.	poorly-sorted, reddish brown, well cemented conglomeritic sand stone (c. grained); sub-angular grains/clasts
						12		→ 50 blows, 2"

12'

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BH or PH Name: SB01	Date: 4/1/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drill Rig Hollow Stem Auger
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 25'
Lat/Long: 32.33192525, -104.08987026	Field Screening: Chloride, PID

LITHOLOGIC / SOIL SAMPLING LOG

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						12	Cgl. SSt	drilling continued to reach 55' or groundwater, whichever encountered first
						13		
						14		
						15		
						16		
						17		
						18		
						19		
						20		Ground water ~19.5' {blow count 40, 11, 7}
S*			N			21	SP	brown, poorly-graded sand (e. grained); *saturated, no plasticity
S*			N			22	CL	red, poorly-graded inorganic clay; high plasticity; *saturated
						23		
					25'	24		Bottom of temporary casing

15' blank (15' to surface)

slotted casing

25'

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BH or PH Name: SB02 (@ PH01)	Date: 4/1/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drilling Hollowstem Auger
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 12.2'
Lat/Long: 32.3317355, -104.0899592	Field Screening: Cl- HACH Strips, Chloride, PID 4:1 Dilution

LITHOLOGIC / SOIL SAMPLING LOG

Comments: 0 - 8.5' bgs previously recorded in PH01, SB02 abandoned and backfilled once terminus was reached (bentonite)

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	Low Range 2156 / High Range 2144	Ø	No	SB02	10-12.2'	10	Cgl / sst	→ 50 blow count, 2"; conglomeritic sandstone; poorly sorted, subangular clasts & well sorted c. grained sandy matrix, well cemented
						12		→ 100 blows, 2"

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BH or PH Name: SB03	Date: 4/1/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drilling Hollow Stem Auger
Lat/Long: 32.33156834, -104.09000395	Field Screening: Cl-HACH Strips; Chloride, PID 4:1 Dilution
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 10.5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Once terminus was reached, the borehole was abandonned and backfilled with ~~bentonite~~

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	1744	Ø	No	SB03	2-3.5'	0–4	cche	7/14/40 poorly-sorted, well-cemented caliche; sandy matrix (c. grained) with sub-angular to sub-rounded cobble clasts
D	508	Ø	No	—	5-5.5'	5–6	cche	50 blows (6")
D	N/A*	Ø	No	SB03A	10-10.5'	10–11	cgl sst	100, 100 (3") poorly-sorted reddish brown, well cemented conglomeritic sandstone (c. grained); sub-angular clasts

*N/A not enough soil to sample and package for lab → only packaged for lab analyses

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BH or PH Name: SB04	Date: 4/1/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drilling Hollow Stem Auger
Lat/Long: 32.33177725, -104.09017951	Field Screening: HACH Cl- Strips; Chloride, PID 4:1 Dilution
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 10.5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Once terminus was reached SB04 was abandonned & backfilled w/ bentonite

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	1416	Ø	No	SB04	2-2.3'	0-2	cche	20/50 (4") poorly sorted caliche with cobble sized clasts, subrounded; sandy (c. grained) matrix
D	720	Ø	No	—	5-5.5'	5	cche	10/50 (6")
D	342	Ø	No	SB04A	10-10.5'	10	Cgl Sst	50 blows, 6" conglomeritic sandstone, poorly sorted, subangular cobble sized to gravel sized clasts; well cemented

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BH or PH Name: SB05	Date: 4/2/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drilling Hollow Stem Auger
Lat/Long: 32.3320465, -104.08992708	Field Screening: Cl⁻ HACH Strips; Chloride, PID 4:1 Dilution
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 10.3'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Once terminus was reached at SB05, the borehole was abandonned & backfilled w/ bentonite

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						1		
						2		5/11/19 (6")
D	196	Ø	No	SB05	2-3.5'	3	SW-SM	brown well-graded sand (c.) with silt and gravel; no plasticity
						4		
						5		5/5/14 (6")
M	348	Ø	No	—	5-6.5'	6	cche	poorly-cemented, poorly sorted caliche with gravel sized clasts
						7		
						8		
						9		
						10	cgl sst	50 blows (4")
M	424	Ø	No	SB05A	10-10.3'	11		conglomeritic sandstone, poorly sorted sandy matrix (c.) with sub angular clasts gravel-cobble sized; well cemented
						12		

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BH or PH Name: SB06	Date: 4/2/20
Site Name: Swearingen #1 SWD	
RP or Incident Number: 2RP-5628	
LTE Job Number: 034819038	
Logged By: A Byers	Method: Drilling Hollow Stem Auger
Lat/Long: 32.3318267, -104.08979472	Field Screening: Cl- HACH Strips; Chloride, PID 4:1 Dilution
Hole Diameter: 6" w/ 2" split spoon	Total Depth: 10.5'

LITHOLOGIC / SOIL SAMPLING LOG

Comments: Pasture → dead vegetation around SB06 area
One terminus was reached, SB06 was abandonned & backfilled w/ bentonite

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
D	3704	Ø	No	SB06	2-2.5'	0–12	cche	21/50 (5") caliche with well-sorted sandy(c.) matrix w/cobble clasts, subangular to subrounded; well cemented
D	1520	Ø	No	—	5-6.5'		cche	31/35/20 (6") caliche with gravel to cobble sized clasts (subrounded to subangular, poorly sorted) within poorly cemented - mod cemented sandy matrix
D	720	Ø	No	SB06A	10-10.5'		Cgl Sst	50 blows 5" conglomeritic sandstone, well-cemented, poorly sorted

ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS

Analytical Report 635241

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen #1 SWD

08/24/2019

03-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

03-SEP-19

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

Reference: XENCO Report No(s): **635241**
Swearingen #1 SWD
Project Address:

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 635241. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 635241 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 635241

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	08-27-19 12:50	0.5 ft	635241-001
SS02	S	08-27-19 13:00	0.5 ft	635241-002

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen #1 SWD

Project ID: *08/24/2019*
Work Order Number(s): *635241*

Report Date: *03-SEP-19*
Date Received: *08/27/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3100232 BTEX by EPA 8021B

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

Certificate of Analysis Summary 635241

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen #1 SWD

Project Id: 08/24/2019
Contact: Chris McKisson
Project Location:

Date Received in Lab: Tue Aug-27-19 02:30 pm
Report Date: 03-SEP-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	635241-001		635241-002					
	Field Id:	SS01		SS02					
	Depth:	0.5- ft		0.5- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	Aug-27-19 12:50		Aug-27-19 13:00					
BTEX by EPA 8021B SUB: T104704400-18-16	***Extracted:***	Aug-28-19 16:00		Aug-28-19 16:00					
	Analyzed:	Aug-29-19 20:30		Aug-29-19 20:50					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00198	0.00198	<0.00200	0.00200				
Toluene		0.00248	0.00198	<0.00200	0.00200				
Ethylbenzene		<0.00198	0.00198	<0.00200	0.00200				
m,p-Xylenes		<0.00397	0.00397	<0.00400	0.00400				
o-Xylene		<0.00198	0.00198	<0.00200	0.00200				
Total Xylenes		<0.00198	0.00198	<0.00200	0.00200				
Total BTEX		0.00248	0.00198	<0.00200	0.00200				
Chloride by EPA 300 SUB: T104704400-18-16	***Extracted:***	Aug-29-19 09:15		Aug-29-19 09:15					
	Analyzed:	Aug-29-19 11:25		Aug-29-19 11:31					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		16500	100	16700	101				
TPH by SW8015 Mod SUB: T104704400-18-16	***Extracted:***	Aug-28-19 14:00		Aug-28-19 14:00					
	Analyzed:	Aug-29-19 11:24		Aug-29-19 11:44					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0				
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0				
Total TPH		<50.0	50.0	<50.0	50.0				
Total GRO-DRO		<50.0	50.0	<50.0	50.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635241

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.27.19 14.30
Lab Sample Id:	635241-001	Date Collected:	08.27.19 12.50	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.29.19 09.15	Basis:	Wet Weight
Seq Number:	3100132			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16500**	100	mg/kg	08.29.19 11.25		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.19 14.00	Basis:	Wet Weight
Seq Number:	3100068			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.19 11.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.19 11.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.19 11.24	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.19 11.24	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.29.19 11.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.29.19 11.24	
o-Terphenyl	84-15-1	87	%	70-135	08.29.19 11.24	

Certificate of Analytical Results 635241

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	08.27.19 14.30
Lab Sample Id:	635241-001	Date Collected:	08.27.19 12.50	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.28.19 16.00	Basis:	Wet Weight
Seq Number:	3100232			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.29.19 20.30	U	1
Toluene	108-88-3	**0.00248**	0.00198	mg/kg	08.29.19 20.30		1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.29.19 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.29.19 20.30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.29.19 20.30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.29.19 20.30	U	1
Total BTEX		**0.00248**	0.00198	mg/kg	08.29.19 20.30		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.19 20.30	
4-Bromofluorobenzene	460-00-4	117	%	70-130	08.29.19 20.30	

Certificate of Analytical Results 635241

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.27.19 14.30
Lab Sample Id:	635241-002	Date Collected:	08.27.19 13.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.29.19 09.15	Basis:	Wet Weight
Seq Number:	3100132			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**16700**	101	mg/kg	08.29.19 11.31		20

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.28.19 14.00	Basis:	Wet Weight
Seq Number:	3100068			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.29.19 11.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.29.19 11.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.29.19 11.44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.29.19 11.44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	08.29.19 11.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	08.29.19 11.44	
o-Terphenyl	84-15-1	88	%	70-135	08.29.19 11.44	

Certificate of Analytical Results 635241

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	08.27.19 14.30
Lab Sample Id:	635241-002	Date Collected:	08.27.19 13.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.28.19 16.00	Basis:	Wet Weight
Seq Number:	3100232			SUB:	T104704400-18-16

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.29.19 20.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.19 20.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.29.19 20.50	
4-Bromofluorobenzene	460-00-4	119	%	70-130	08.29.19 20.50	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 635241

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100132 — Matrix: Solid — Date Prep: 08.29.19
MB Sample Id: 7685222-1-BLK — LCS Sample Id: 7685222-1-BKS — LCSD Sample Id: 7685222-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	258	103	256	102	90-110	1	20	mg/kg	08.29.19 10:44	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100132 — Matrix: Soil — Date Prep: 08.29.19
Parent Sample Id: 635165-001 — MS Sample Id: 635165-001 S — MSD Sample Id: 635165-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.51	252	267	103	262	101	90-110	2	20	mg/kg	08.29.19 11:02	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3100132 — Matrix: Soil — Date Prep: 08.29.19
Parent Sample Id: 635362-013 — MS Sample Id: 635362-013 S — MSD Sample Id: 635362-013 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	25.0	250	272	99	272	99	90-110	0	20	mg/kg	08.29.19 12:24	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3100068 — Matrix: Solid — Date Prep: 08.28.19
MB Sample Id: 7685193-1-BLK — LCS Sample Id: 7685193-1-BKS — LCSD Sample Id: 7685193-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1030	103	988	99	70-135	4	20	mg/kg	08.29.19 04:25	
Diesel Range Organics (DRO)	<25.0	1000	938	94	917	92	70-135	2	20	mg/kg	08.29.19 04:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		119		118		70-135	%	08.29.19 04:25
o-Terphenyl	83		108		101		70-135	%	08.29.19 04:25

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

QC Summary 635241

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3100068 — Matrix: Soil — Date Prep: 08.28.19
Parent Sample Id: 635225-001 — MS Sample Id: 635225-001 S — MSD Sample Id: 635225-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	972	97	970	97	70-135	0	20	mg/kg	08.29.19 05:24	
Diesel Range Organics (DRO)	1200	999	2000	80	2010	81	70-135	0	20	mg/kg	08.29.19 05:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		113		70-135	%	08.29.19 05:24
o-Terphenyl	116		111		70-135	%	08.29.19 05:24

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3100232 — Matrix: Solid — Date Prep: 08.28.19
MB Sample Id: 7685217-1-BLK — LCS Sample Id: 7685217-1-BKS — LCSD Sample Id: 7685217-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0873	87	0.0969	97	70-130	10	35	mg/kg	08.29.19 11:50	
Toluene	<0.000456	0.100	0.0886	89	0.0992	99	70-130	11	35	mg/kg	08.29.19 11:50	
Ethylbenzene	<0.000565	0.100	0.0955	96	0.108	108	70-130	12	35	mg/kg	08.29.19 11:50	
m,p-Xylenes	<0.00101	0.200	0.186	93	0.210	105	70-130	12	35	mg/kg	08.29.19 11:50	
o-Xylene	<0.000344	0.100	0.0962	96	0.109	109	70-130	12	35	mg/kg	08.29.19 11:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		101		70-130	%	08.29.19 11:50
4-Bromofluorobenzene	95		109		111		70-130	%	08.29.19 11:50

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3100232 — Matrix: Soil — Date Prep: 08.28.19
Parent Sample Id: 635221-001 — MS Sample Id: 635221-001 S — MSD Sample Id: 635221-001 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	0.0673	67	0.0471	48	70-130	35	35	mg/kg	08.29.19 12:30	X
Toluene	0.00123	0.0998	0.0724	71	0.0514	51	70-130	34	35	mg/kg	08.29.19 12:30	X
Ethylbenzene	0.000656	0.0998	0.0774	77	0.0532	53	70-130	37	35	mg/kg	08.29.19 12:30	XF
m,p-Xylenes	0.00174	0.200	0.151	75	0.102	51	70-130	39	35	mg/kg	08.29.19 12:30	XF
o-Xylene	0.000825	0.0998	0.0804	80	0.0536	53	70-130	40	35	mg/kg	08.29.19 12:30	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	08.29.19 12:30
4-Bromofluorobenzene	118		114		70-130	%	08.29.19 12:30

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

Chain of Custody

Work Order No: 635241

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970) 285-9985	Email:	llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

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

Project Name:	Swearingen #1 SWD	Turn Around	
Project Number:		Routine	X
P.O. Number:	08/24/2019	Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	1.0	Thermometer ID	T-NM-007	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No (N/A)	Total Containers:	2	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01	S	08/27/2019	12:50	0.5'	1	X	X	X
SS02	S	08/27/2019	13:00	0.5'	1	X	X	X

Work Order Notes

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		08/27/2019 14:30	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

Inter-Office Shipment

IOS Number **46991**

Date/Time: 08/27/19 15:46
Lab# From: **Carlsbad**
Lab# To: **Midland**

Created by: Elizabeth Mcclellan
Delivery Priority:
Air Bill No.: 776092467348

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

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
635241-001	S	SS01	08/27/19 12:50	SW8015MOD_NM	TPH by SW8015 Mod	09/03/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	
635241-001	S	SS01	08/27/19 12:50	SW8021B	BTEX by EPA 8021B	09/03/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635241-001	S	SS01	08/27/19 12:50	E300_CL	Chloride by EPA 300	09/03/19	02/23/20	JKR	CL	
635241-002	S	SS02	08/27/19 13:00	SW8021B	BTEX by EPA 8021B	09/03/19	09/10/19	JKR	BR4FBZ BZ BZME EBZ X	
635241-002	S	SS02	08/27/19 13:00	E300_CL	Chloride by EPA 300	09/03/19	02/23/20	JKR	CL	
635241-002	S	SS02	08/27/19 13:00	SW8015MOD_NM	TPH by SW8015 Mod	09/03/19	09/10/19	JKR	GRO-DRO PHCC10C28 PI	

Inter Office Shipment or Sample Comments:

Relinquished By: Elizabeth McClellan

Date Relinquished: 08/27/2019

Received By: Brianna Teel

Date Received: 08/28/2019 11:29

Cooler Temperature: 2.3

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 46991

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

Sent By: Elizabeth McClellan **Date Sent:** 08/27/2019 03:46 PM

Received By: Brianna Teel **Date Received:** 08/28/2019 11:29 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.3	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

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

Checklist reviewed by: Brianna Teel Date: 08/28/2019

Brianna Teel

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/27/2019 02:30:00 PM

Work Order #: 635241

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

Temperature Measuring device used : T-NM-007

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/27/2019

Checklist reviewed by: Jessica Kramer Date: 08/28/2019

Jessica Kramer

Analytical Report 635577

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen 1 SWD

34819038

30-AUG-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

30-AUG-19

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

Reference: XENCO Report No(s): **635577**
Swearingen 1 SWD
Project Address:

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 635577. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 635577 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH01	S	08-29-19 10:20	1.5 ft	635577-001
PH01A	S	08-29-19 11:25	4 ft	635577-002
PH02	S	08-29-19 10:00	0.5 ft	635577-003
PH02A	S	08-29-19 12:30	1.5 ft	635577-004
PH03	S	08-29-19 12:55	1.5 ft	635577-005
PH03A	S	08-29-19 13:00	3.0 ft	635577-006
PH04	S	08-29-19 13:30	1.5 ft	635577-007

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen 1 SWD

Project ID: *34819038*
Work Order Number(s): *635577*

Report Date: *30-AUG-19*
Date Received: *08/29/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 635577

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen 1 SWD

Project Id: 34819038
Contact: Chris McKisson
Project Location:

Date Received in Lab: Thu Aug-29-19 03:20 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	635577-001		635577-002		635577-003		635577-004		635577-005		635577-006	
	Field Id:	PH01		PH01A		PH02		PH02A		PH03		PH03A	
	Depth:	1.5- ft		4- ft		0.5- ft		1.5- ft		1.5- ft		3.0- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Aug-29-19 10:20		Aug-29-19 11:25		Aug-29-19 10:00		Aug-29-19 12:30		Aug-29-19 12:55		Aug-29-19 13:00	
Chloride by EPA 300	***Extracted:***	Aug-29-19 15:57		Aug-29-19 15:57		Aug-29-19 15:57		Aug-29-19 15:57		Aug-29-19 15:57		Aug-29-19 15:57	
	Analyzed:	Aug-29-19 18:04		Aug-29-19 17:23		Aug-29-19 17:30		Aug-29-19 17:36		Aug-29-19 17:42		Aug-29-19 17:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		15900 D	10000	15500 D	10000	13700 D	9940	15800 D	9960	2760	198	14300 D	9980

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 635577

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen 1 SWD

Project Id: 34819038
Contact: Chris McKisson
Project Location:

Date Received in Lab: Thu Aug-29-19 03:20 pm
Report Date: 30-AUG-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	635577-007					
	Field Id:	PH04					
	Depth:	1.5- ft					
	Matrix:	SOIL					
	Sampled:	Aug-29-19 13:30					
Chloride by EPA 300	***Extracted:***	Aug-29-19 15:57					
	Analyzed:	Aug-29-19 17:55					
	Units/RL:	mg/kg	RL				
Chloride		183	9.98				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH01**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-001	Date Collected:	08.29.19 10.20	Sample Depth:	1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15900**	10000	mg/kg	08.30.19 14.48	D	1000

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH01A**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-002	Date Collected:	08.29.19 11.25	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15500**	10000	mg/kg	08.30.19 15.20	D	1000

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH02**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-003	Date Collected:	08.29.19 10.00	Sample Depth:	0.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13700**	9940	mg/kg	08.30.19 14.54	D	1000

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH02A**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-004	Date Collected:	08.29.19 12.30	Sample Depth:	1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15800**	9960	mg/kg	08.30.19 10.39	D	1000

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH03**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-005	Date Collected:	08.29.19 12.55	Sample Depth:	1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2760**	198	mg/kg	08.29.19 17.42		20

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH03A**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-006	Date Collected:	08.29.19 13.00	Sample Depth:	3.0 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14300**	9980	mg/kg	08.30.19 14.42	D	1000

Certificate of Analytical Results 635577

LT Environmental, Inc., Arvada, CO

Swearingen 1 SWD

Sample Id:	**PH04**	Matrix:	Soil	Date Received:	08.29.19 15.20
Lab Sample Id:	635577-007	Date Collected:	08.29.19 13.30	Sample Depth:	1.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	08.29.19 15.57	Basis:	Wet Weight
Seq Number:	3100197				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**183**	9.98	mg/kg	08.29.19 17.55		1

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 635577

LT Environmental, Inc.

Swearingen 1 SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100197 Matrix: Solid Date Prep: 08.29.19
MB Sample Id: 7685207-1-BLK LCS Sample Id: 7685207-1-BKS LCSD Sample Id: 7685207-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	266	106	267	107	80-120	0	20	mg/kg	08.29.19 14:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100197 Matrix: Soil Date Prep: 08.29.19
Parent Sample Id: 635446-019 MS Sample Id: 635446-019 S MSD Sample Id: 635446-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	24.1	199	234	105	245	111	80-120	5	20	mg/kg	08.29.19 15:09	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3100197 Matrix: Solid Date Prep: 08.29.19
Parent Sample Id: 635590-001 MS Sample Id: 635590-001 S MSD Sample Id: 635590-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	52.5	199	273	111	291	119	80-120	6	20	mg/kg	08.29.19 19:22	

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

Chain of Custody

Work Order No: 635577

XENCO LABORATORIES

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

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Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970) 285-9985	Email:	llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

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

Project Name:	Swearingen 1 SWD	Turn Around	
Project Number:	34819038	Routine	X
P.O. Number:		Rush: ROUTINE	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	2.4	Thermometer ID	TNM007
Received Intact:	Yes No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	7

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (EPA 300.0)
PH01	S	08/29/2019	10:20	1.5'	1	X
PH01A	S		11:25	4'	1	X
PH02	S		10:00	0.5'	1	X
PH02A	S		12:30	1.5'	1	X
PH03	S		12:55	1.5'	1	X
PH03A	S		13:00	3.0'	1	X
PH04	S	08/29/2019	13:30	1.5'	1	X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		08/29/2019 15:25	2		
			4		
			6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/29/2019 03:20:00 PM

Work Order #: 635577

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 08/29/2019

Checklist reviewed by: Jessica Kramer Date: 08/30/2019

Analytical Report 637301

for

LT Environmental, Inc.

Project Manager: Dan Moir

Swearingen #1 SWD

034819038

23-SEP-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

23-SEP-19

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

Reference: XENCO Report No(s): **637301**
Swearingen #1 SWD
Project Address:

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637301. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 637301 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH03B	S	09-18-19 08:30	6 ft	637301-001
PH03C	S	09-18-19 08:50	9 ft	637301-002
PH04A	S	09-18-19 09:10	4 ft	637301-003
PH02B	S	09-18-19 09:30	8 ft	637301-004
PH01B	S	09-18-19 10:15	8.5 ft	637301-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen #1 SWD

Project ID: *034819038*
Work Order Number(s): *637301*

Report Date: *23-SEP-19*
Date Received: *09/18/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 637301

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen #1 SWD

Project Id: 034819038
Contact: Dan Moir
Project Location:

Date Received in Lab: Wed Sep-18-19 01:45 pm
Report Date: 23-SEP-19
Project Manager: Jessica Kramer

Analysis Requested												
	Lab Id:	637301-001		637301-002		637301-003		637301-004		637301-005		
	Field Id:	PH03B		PH03C		PH04A		PH02B		PH01B		
	Depth:	6- ft		9- ft		4- ft		8- ft		8.5- ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Sep-18-19 08:30		Sep-18-19 08:50		Sep-18-19 09:10		Sep-18-19 09:30		Sep-18-19 10:15		
Chloride by EPA 300	***Extracted:***	Sep-18-19 16:00		Sep-18-19 16:00		Sep-18-19 16:00		Sep-18-19 16:00		Sep-18-19 16:00		
	Analyzed:	Sep-18-19 19:48		Sep-18-19 19:55		Sep-18-19 20:01		Sep-18-19 20:08		Sep-18-19 20:14		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		13800 D	494	1300	50.1	846	101	9260 D	500	3350 D	200	

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH03B**	Matrix:	Soil	Date Received:	09.18.19 13.45
Lab Sample Id:	637301-001	Date Collected:	09.18.19 08.30	Sample Depth:	6 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.18.19 16.00	Basis:	Wet Weight
Seq Number:	3101899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13800**	494	mg/kg	09.19.19 18.26	D	50

Certificate of Analytical Results 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH03C**	Matrix:	Soil	Date Received:	09.18.19 13.45
Lab Sample Id:	637301-002	Date Collected:	09.18.19 08.50	Sample Depth:	9 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.18.19 16.00	Basis:	Wet Weight
Seq Number:	3101899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1300**	50.1	mg/kg	09.18.19 19.55		5

Certificate of Analytical Results 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH04A**	Matrix:	Soil	Date Received:	09.18.19 13.45
Lab Sample Id:	637301-003	Date Collected:	09.18.19 09.10	Sample Depth:	4 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.18.19 16.00	Basis:	Wet Weight
Seq Number:	3101899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**846**	101	mg/kg	09.18.19 20.01		10

Certificate of Analytical Results 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH02B**	Matrix:	Soil	Date Received:	09.18.19 13.45
Lab Sample Id:	637301-004	Date Collected:	09.18.19 09.30	Sample Depth:	8 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.18.19 16.00	Basis:	Wet Weight
Seq Number:	3101899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**9260**	500	mg/kg	09.19.19 12.59	D	50

Certificate of Analytical Results 637301

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH01B**	Matrix:	Soil	Date Received:	09.18.19 13.45
Lab Sample Id:	637301-005	Date Collected:	09.18.19 10.15	Sample Depth:	8.5 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	09.18.19 16.00	Basis:	Wet Weight
Seq Number:	3101899				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**3350**	200	mg/kg	09.19.19 17.23	D	20

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 637301

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101899 Matrix: Solid Date Prep: 09.18.19
MB Sample Id: 7686418-1-BLK LCS Sample Id: 7686418-1-BKS LCSD Sample Id: 7686418-1-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	258	103	90-110	1	20	mg/kg	09.18.19 18:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101899 Matrix: Soil Date Prep: 09.18.19
Parent Sample Id: 637191-020 MS Sample Id: 637191-020 S MSD Sample Id: 637191-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.71	200	204	100	216	106	90-110	6	20	mg/kg	09.18.19 19:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3101899 Matrix: Solid Date Prep: 09.18.19
Parent Sample Id: 637312-001 MS Sample Id: 637312-001 S MSD Sample Id: 637312-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1220	1010	2390	116	2400	117	90-110	0	20	mg/kg	09.18.19 21:44	X

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

Chain of Custody

Work Order No: 637301

XENCO LABORATORIES

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

www.xenco.com Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental, Inc.	Company Name:	LT Environmental
Address:	820 Megan Avenue, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	(970) 285-9985	Email:	llaumbach@ltenv.com, cmckisson@ltenv.com, asmith@ltenv.com

Work Order Comments

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

Project Name:	Swearingen #1 SWD	Turn Around	
Project Number:	34819038	Routine	X
P.O. Number:		Rush:	
Sampler's Name:	Lynda Laumbach	Due Date:	

SAMPLE RECEIPT			
Temp Blank:	Yes No	Wet Ice:	Yes No
Temperature (°C):	0.0	Thermometer ID	
Received Intact:	Yes No	T-NM-007	
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes No N/A	Total Containers:	5

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH03B	S	09/18/19	8:30	6'	1			X
PH03C	S	09/18/19	8:50	9'	1			X
PH04A	S		9:10	4'	1			X
PH02B	S		9:30	8'	1			X
PH01B	S		10:15	8.5'	1			X

ANALYSIS REQUEST

Work Order Notes

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

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			09/18/19 13:45	2		
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 09/18/2019 01:45:00 PM

Work Order #: 637301

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)?	0
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 09/18/2019

Checklist reviewed by: Kelsey Brooks Date: 09/19/2019

Analytical Report 644426

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen #1 SWD

034819038

02-DEC-19

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

02-DEC-19

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

Reference: XENCO Report No(s): **644426**
Swearingen #1 SWD
Project Address: Rural Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 644426. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 644426 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH05	S	11-23-19 08:00	1 ft	644426-001
PH05A	S	11-23-19 08:55	8 ft	644426-002
PH06	S	11-23-19 10:20	1 ft	644426-003
PH06A	S	11-23-19 10:45	6 ft	644426-004
PH06B	S	11-23-19 10:55	8 ft	644426-005

Version: 1.%

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen #1 SWD

Project ID: *034819038*
Work Order Number(s): *644426*

Report Date: *02-DEC-19*
Date Received: *11/25/2019*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3108829 BTEX by EPA 8021B

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

Certificate of Analysis Summary 644426

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen #1 SWD

Project Id: 034819038
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Mon Nov-25-19 11:25 am
Report Date: 02-DEC-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	644426-001		644426-002		644426-003		644426-004		644426-005	
	Field Id:	PH05		PH05A		PH06		PH06A		PH06B	
	Depth:	1- ft		8- ft		1- ft		6- ft		8- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-23-19 08:00		Nov-23-19 08:55		Nov-23-19 10:20		Nov-23-19 10:45		Nov-23-19 10:55	
BTEX by EPA 8021B	*Extracted:*	Nov-26-19 10:00		Nov-26-19 10:00		Nov-26-19 10:00		Nov-26-19 10:00		Nov-26-19 10:00	
	Analyzed:	Nov-26-19 17:07		Nov-26-19 17:26		Nov-26-19 17:45		Nov-26-19 18:04		Nov-26-19 18:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00403	0.00403	<0.00401	0.00401	<0.00402	0.00402	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Xylenes, Total		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	Nov-25-19 18:11		Nov-25-19 18:11		Nov-25-19 18:11		Nov-25-19 18:11		Nov-25-19 18:11	
	Analyzed:	Nov-25-19 22:31		Nov-25-19 22:37		Nov-25-19 22:57		Nov-25-19 23:04		Nov-25-19 23:11	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<10.0	10.0	65.5	10.1	11.3	10.1	157	10.0	73.8	10.0
TPH by SW8015 Mod	*Extracted:*	Nov-25-19 17:00		Nov-25-19 17:00		Nov-25-19 17:00		Nov-25-19 17:00		Nov-26-19 12:00	
	Analyzed:	Nov-26-19 07:11		Nov-26-19 07:11		Nov-26-19 07:31		Nov-26-19 07:31		Nov-26-19 13:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.0	50.0	<50.1	50.1
Diesel Range Organics (DRO)		<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.0	50.0	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.0	50.0	<50.1	50.1
Total GRO-DRO		<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.0	50.0	<50.1	50.1
Total TPH		<50.2	50.2	<50.3	50.3	<50.1	50.1	<50.0	50.0	<50.1	50.1

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-001	Date Collected:	11.23.19 08.00	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.25.19 18.11	Basis:	Wet Weight
Seq Number:	3108699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	11.25.19 22.31	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.25.19 17.00	Basis:	Wet Weight
Seq Number:	3108738				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	11.26.19 07.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	11.26.19 07.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	11.26.19 07.11	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	11.26.19 07.11	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	11.26.19 07.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-135	11.26.19 07.11	
o-Terphenyl	84-15-1	133	%	70-135	11.26.19 07.11	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH05**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-001	Date Collected:	11.23.19 08.00	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.26.19 10.00	Basis:	Wet Weight
Seq Number:	3108829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	11.26.19 17.07	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	11.26.19 17.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	11.26.19 17.07	
4-Bromofluorobenzene	460-00-4	102	%	70-130	11.26.19 17.07	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-002	Date Collected:	11.23.19 08.55	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.25.19 18.11	Basis:	Wet Weight
Seq Number:	3108699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.5**	10.1	mg/kg	11.25.19 22.37		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.25.19 17.00	Basis:	Wet Weight
Seq Number:	3108738				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	11.26.19 07.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	11.26.19 07.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	11.26.19 07.11	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	11.26.19 07.11	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	11.26.19 07.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.26.19 07.11	
o-Terphenyl	84-15-1	117	%	70-135	11.26.19 07.11	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH05A**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-002	Date Collected:	11.23.19 08.55	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.26.19 10.00	Basis:	Wet Weight
Seq Number:	3108829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	11.26.19 17.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.26.19 17.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.26.19 17.26	
1,4-Difluorobenzene	540-36-3	99	%	70-130	11.26.19 17.26	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id: **PH06** Matrix: Soil Date Received:11.25.19 11.25

Lab Sample Id: 644426-003 Date Collected: 11.23.19 10.20 Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: MAB % Moisture:

Analyst: MAB Date Prep: 11.25.19 18.11 Basis: Wet Weight

Seq Number: 3108699

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**11.3**	10.1	mg/kg	11.25.19 22.57		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P

Tech: DTH % Moisture:

Analyst: DTH Date Prep: 11.25.19 17.00 Basis: Wet Weight

Seq Number: 3108738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.26.19 07.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.26.19 07.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.26.19 07.31	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.26.19 07.31	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.26.19 07.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	11.26.19 07.31	
o-Terphenyl	84-15-1	120	%	70-135	11.26.19 07.31	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH06**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-003	Date Collected:	11.23.19 10.20	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.26.19 10.00	Basis:	Wet Weight
Seq Number:	3108829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.26.19 17.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1
Xylenes, Total	1330-20-7	<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.26.19 17.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.26.19 17.45	
1,4-Difluorobenzene	540-36-3	90	%	70-130	11.26.19 17.45	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-004	Date Collected:	11.23.19 10.45	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.25.19 18.11	Basis:	Wet Weight
Seq Number:	3108699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**157**	10.0	mg/kg	11.25.19 23.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.25.19 17.00	Basis:	Wet Weight
Seq Number:	3108738				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	11.26.19 07.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	11.26.19 07.31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	11.26.19 07.31	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	11.26.19 07.31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	11.26.19 07.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	11.26.19 07.31	
o-Terphenyl	84-15-1	119	%	70-135	11.26.19 07.31	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH06A**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-004	Date Collected:	11.23.19 10.45	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.26.19 10.00	Basis:	Wet Weight
Seq Number:	3108829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.26.19 18.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.26.19 18.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	105	%	70-130	11.26.19 18.04	
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.26.19 18.04	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH06B**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-005	Date Collected:	11.23.19 10.55	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.25.19 18.11	Basis:	Wet Weight
Seq Number:	3108699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.8**	10.0	mg/kg	11.25.19 23.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	11.26.19 12.00	Basis:	Wet Weight
Seq Number:	3108876				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	11.26.19 13.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	11.26.19 13.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	11.26.19 13.08	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	11.26.19 13.08	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	11.26.19 13.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-135	11.26.19 13.08	
o-Terphenyl	84-15-1	130	%	70-135	11.26.19 13.08	

Certificate of Analytical Results 644426

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH06B**	Matrix:	Soil	Date Received:	11.25.19 11.25
Lab Sample Id:	644426-005	Date Collected:	11.23.19 10.55	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.26.19 10.00	Basis:	Wet Weight
Seq Number:	3108829				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	11.26.19 18.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	11.26.19 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115	%	70-130	11.26.19 18.23	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.26.19 18.23	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 644426

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108699 — Matrix: Solid — Date Prep: 11.25.19
MB Sample Id: 7691178-1-BLK — LCS Sample Id: 7691178-1-BKS — LCSD Sample Id: 7691178-1-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	259	104	257	103	90-110	1	20	mg/kg	11.25.19 17:00	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3108699 — Matrix: Soil — Date Prep: 11.25.19
Parent Sample Id: 644389-021 — MS Sample Id: 644389-021 S — MSD Sample Id: 644389-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.4	202	254	106	251	105	90-110	1	20	mg/kg	11.25.19 20:48	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108738 — Matrix: Solid — Date Prep: 11.25.19
MB Sample Id: 7691221-1-BLK — LCS Sample Id: 7691221-1-BKS — LCSD Sample Id: 7691221-1-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	967	97	70-135	10	35	mg/kg	11.26.19 03:34	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1110	111	70-135	4	35	mg/kg	11.26.19 03:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		131		125		70-135	%	11.26.19 03:34
o-Terphenyl	108		120		120		70-135	%	11.26.19 03:34

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108876 — Matrix: Solid — Date Prep: 11.26.19
MB Sample Id: 7691230-1-BLK — LCS Sample Id: 7691230-1-BKS — LCSD Sample Id: 7691230-1-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	952	95	868	87	70-135	9	35	mg/kg	11.26.19 12:48	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1050	105	70-135	6	35	mg/kg	11.26.19 12:48	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		119		113		70-135	%	11.26.19 12:48
o-Terphenyl	103		123		116		70-135	%	11.26.19 12:48

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

QC Summary 644426

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108738 — Matrix: Solid — Date Prep: 11.25.19
MB Sample Id: 7691221-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.26.19 03:34	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108876 — Matrix: Solid — Date Prep: 11.26.19
MB Sample Id: 7691230-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	11.26.19 12:28	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108738 — Matrix: Soil — Date Prep: 11.25.19
Parent Sample Id: 644389-020 — MS Sample Id: 644389-020 S — MSD Sample Id: 644389-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1000	100	853	84	70-135	16	35	mg/kg	11.26.19 04:13	
Diesel Range Organics (DRO)	<50.2	1000	1150	115	1040	103	70-135	10	35	mg/kg	11.26.19 04:13	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	132		127		70-135	%	11.26.19 04:13
o-Terphenyl	127		118		70-135	%	11.26.19 04:13

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3108876 — Matrix: Soil — Date Prep: 11.26.19
Parent Sample Id: 644426-005 — MS Sample Id: 644426-005 S — MSD Sample Id: 644426-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.3	1010	930	92	1010	100	70-135	8	35	mg/kg	11.26.19 13:08	
Diesel Range Organics (DRO)	<50.3	1010	1140	113	1180	117	70-135	3	35	mg/kg	11.26.19 13:08	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		130		70-135	%	11.26.19 13:08
o-Terphenyl	128		129		70-135	%	11.26.19 13:08

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

QC Summary 644426

LT Environmental, Inc.

Swearingen #1 SWD

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

Seq Number: 3108829 Matrix: Solid Date Prep: 11.26.19

MB Sample Id: 7691183-1-BLK LCS Sample Id: 7691183-1-BKS LCSD Sample Id: 7691183-1-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	0.0841	84	0.0821	82	70-130	2	35	mg/kg	11.26.19 15:24	
Toluene	<0.00200	0.100	0.0826	83	0.0816	82	70-130	1	35	mg/kg	11.26.19 15:24	
Ethylbenzene	<0.00200	0.100	0.0800	80	0.0794	79	71-129	1	35	mg/kg	11.26.19 15:24	
m,p-Xylenes	<0.00400	0.200	0.169	85	0.169	85	70-135	0	35	mg/kg	11.26.19 15:24	
o-Xylene	<0.00200	0.100	0.0865	87	0.0857	86	71-133	1	35	mg/kg	11.26.19 15:24	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		100		70-130	%	11.26.19 15:24
4-Bromofluorobenzene	103		101		101		70-130	%	11.26.19 15:24

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

Seq Number: 3108829 Matrix: Soil Date Prep: 11.26.19

Parent Sample Id: 644426-001 MS Sample Id: 644426-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	70-130	mg/kg	11.26.19 16:02	
Toluene	<0.00200	0.100	0.102	102	70-130	mg/kg	11.26.19 16:02	
Ethylbenzene	<0.00200	0.100	0.0980	98	71-129	mg/kg	11.26.19 16:02	
m,p-Xylenes	<0.00100	0.200	0.207	104	70-135	mg/kg	11.26.19 16:02	
o-Xylene	<0.00200	0.100	0.106	106	71-133	mg/kg	11.26.19 16:02	

Surrogate	MS %Rec	MS Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		70-130	%	11.26.19 16:02
4-Bromofluorobenzene	111		70-130	%	11.26.19 16:02

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

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

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

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

Chain of Custody

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701
www.xenco.com

Work Order No: 644426

Page 1 of 1

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com tabayers@ltenv.com

Work Order Comments

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

Project Name:	Sweeringen #1 SWD	Turn Around	
Project Number:	03481938	Routine	X
Project Location	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-5628	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.2	Thermometer ID	
Received Intact:	(Yes) No	T-NM-007	
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	9

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH05	S	11/23/19	0800	1'	1	X	X	X	
	PH05A	S		0855	8'	1	X	X	X	
	PH06	S		1020	1'	1	X	X	X	
	PH06A	S		1045	6'	1	X	X	X	
	PH06B	S		1055	8'	1	X	X	X	

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

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

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		11/25/19 11:25	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 11/25/2019 11:25:00 AM

Work Order #: 644426

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**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 11/25/2019

Checklist reviewed by: Jessica Kramer Date: 11/26/2019

Jessica Kramer

Analytical Report 644427

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen #1 SWD

034819038

06.23.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-34), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

06.23.2020

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

Reference: XENCO Report No(s): **644427**
Swearingen #1 SWD
Project Address: Rural Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 644427. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 644427 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 644427

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BG01	S	11.23.2019 12:40	3 ft	644427-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen #1 SWD

Project ID: *034819038*
Work Order Number(s): *644427*

Report Date: *06.23.2020*
Date Received: *11.25.2019*

Sample receipt non conformances and comments:

V1.001 revision (client email) Corrected project name. JK 06/23/20

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 644427

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen #1 SWD

Project Id: 034819038
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Mon 11.25.2019 11:25
Report Date: 06.23.2020 09:09
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	644427-001					
	Field Id:	BG01					
	Depth:	3- ft					
	Matrix:	SOIL					
	Sampled:	11.23.2019 12:40					
Chloride by EPA 300	***Extracted:***	11.25.2019 18:11					
	Analyzed:	11.25.2019 23:18					
	Units/RL:	mg/kg	RL				
Chloride		1300	50.4				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 644427

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**BG01**	Matrix:	Soil	Date Received:	11.25.2019 11:25
Lab Sample Id:	644427-001	Date Collected:	11.23.2019 12:40	Sample Depth:	3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	11.25.2019 18:11	Basis:	Wet Weight
Seq Number:	3108699				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1300**	50.4	mg/kg	11.25.2019 23:18		5

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 644427

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3108699 Matrix: Solid Date Prep: 11.25.2019

MB Sample Id: 7691178-1-BLK LCS Sample Id: 7691178-1-BKS LCSD Sample Id: 7691178-1-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	259	104	257	103	90-110	1	20	mg/kg	11.25.2019 17:00	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3108699 Matrix: Soil Date Prep: 11.25.2019

Parent Sample Id: 644389-021 MS Sample Id: 644389-021 S MSD Sample Id: 644389-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.4	202	254	106	251	105	90-110	1	20	mg/kg	11.25.2019 20:48	

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

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

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

Chain of Custody

Work Order No: 604427

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 www.xenco.com

Project Manager:	Chris McKisson	Bill to: (if different)	Chris McKisson
Company Name:	LT Environmental	Company Name:	LT Environmental
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmkisson@ltenv.com & abyers@ltenv.com

Work Order Comments

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

Project Name:	Swearingen #1 SWD	Turn Around	
Project Number:	03481903B	Routine	X
Project Location	Rural Eddy County	Rush:	
Sampler's Name:	Anna Byers	Due Date:	
PO #:	2RP-5628	Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	0.2	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No (N/A)	Correction Factor:	-0.2
Sample Custody Seals:	Yes No (N/A)	Total Containers:	1

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	ANALYSIS REQUEST: Chloride (EPA 300.0)	Sample Comments
	BG01	S	11/23/19	1240	3'	1		X	

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

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		11/25/19 11:25	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

Analytical Report 646527

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen #1 SWD

034819038

08-JAN-20

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

08-JAN-20

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

Reference: XENCO Report No(s): **646527**
Swearingen #1 SWD
Project Address: Rural Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 646527. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 646527 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH07	S	12-13-19 09:50	4 ft	646527-001
PH07A	S	12-13-19 10:00	6 ft	646527-002
PH08	S	12-13-19 13:15	7 ft	646527-003
PH08A	S	12-13-19 13:20	8 ft	646527-004
PH09	S	12-13-19 13:45	2 ft	646527-005
PH09A	S	12-13-19 14:23	9 ft	646527-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen #1 SWD

Project ID: *034819038*
Work Order Number(s): *646527*

Report Date: *08-JAN-20*
Date Received: *12/16/2019*

Sample receipt non conformances and comments:

Per clients email, corrected sample names as follows below. new version generated. JK 01/08/2020
PH05 To PH07
PH05A To PH07A
PH06 To PH08
PH06A To PH08A
PH07 To PH09
PH07A To PH09A

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3110714 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3110716 Chloride by EPA 300
Lab Sample ID 646531-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 646527-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3110737 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 646527-004.

Certificate of Analysis Summary 646527

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen #1 SWD

Project Id: 034819038
Contact: Chris McKisson
Project Location: Rural Eddy County

Date Received in Lab: Mon Dec-16-19 04:10 pm
Report Date: 08-JAN-20
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	646527-001		646527-002		646527-003		646527-004		646527-005		646527-006	
	Field Id:	PH07		PH07A		PH08		PH08A		PH09		PH09A	
	Depth:	4- ft		6- ft		7- ft		8- ft		2- ft		9- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-13-19 09:50		Dec-13-19 10:00		Dec-13-19 13:15		Dec-13-19 13:20		Dec-13-19 13:45		Dec-13-19 14:23	
BTEX by EPA 8021B	*Extracted:*	Dec-16-19 17:29		Dec-16-19 17:29		Dec-16-19 17:29		Dec-16-19 17:29		Dec-16-19 17:29		Dec-16-19 17:29	
	Analyzed:	Dec-17-19 02:17		Dec-17-19 02:36		Dec-17-19 02:55		Dec-17-19 03:14		Dec-17-19 03:33		Dec-17-19 01:57	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00393	0.00393	<0.00393	0.00393	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398
o-Xylene		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Xylenes, Total		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00199	0.00199	<0.00196	0.00196	<0.00196	0.00196	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300	*Extracted:*	Dec-16-19 19:38		Dec-16-19 19:38		Dec-16-19 19:38		Dec-16-19 19:38		Dec-16-19 19:38		Dec-16-19 19:38	
	Analyzed:	Dec-16-19 21:38		Dec-16-19 21:57		Dec-16-19 22:03		Dec-16-19 22:09		Dec-16-19 22:15		Dec-16-19 22:34	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2160	9.98	2510	10.1	186	10.0	552	10.0	1140	10.1	303	9.88
TPH by SW8015 Mod	*Extracted:*	Dec-16-19 17:00		Dec-16-19 17:00		Dec-16-19 17:00		Dec-16-19 17:00		Dec-16-19 17:00		Dec-16-19 17:00	
	Analyzed:	Dec-16-19 20:45		Dec-16-19 21:04		Dec-16-19 21:04		Dec-16-19 22:04		Dec-16-19 22:24		Dec-16-19 22:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<49.8	49.8	<49.9	49.9	<50.0	50.0
Diesel Range Organics (DRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<49.8	49.8	<49.9	49.9	<50.0	50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<50.0	50.0	<50.2	50.2	<49.8	49.8	<49.9	49.9	<50.0	50.0
Total GRO-DRO		<50.0	50.0	<50.0	50.0	<50.2	50.2	<49.8	49.8	<49.9	49.9	<50.0	50.0
Total TPH		<50.0	50.0	<50.0	50.0	<50.2	50.2	<49.8	49.8	<49.9	49.9	<50.0	50.0

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-001	Date Collected:	12.13.19 09.50	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2160**	9.98	mg/kg	12.16.19 21.38		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110729				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.19 20.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.19 20.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.19 20.45	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.16.19 20.45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.19 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-135	12.16.19 20.45	
o-Terphenyl	84-15-1	128	%	70-135	12.16.19 20.45	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH07**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-001	Date Collected:	12.13.19 09.50	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.17.19 02.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.17.19 02.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	12.17.19 02.17	
4-Bromofluorobenzene	460-00-4	116	%	70-130	12.17.19 02.17	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-002	Date Collected:	12.13.19 10.00	Sample Depth:	6 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2510**	10.1	mg/kg	12.16.19 21.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110729				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.19 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.19 21.04	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.16.19 21.04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	12.16.19 21.04	
o-Terphenyl	84-15-1	124	%	70-135	12.16.19 21.04	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH07A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-002	Date Collected:	12.13.19 10.00	Sample Depth:	6 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1
m,p-Xylenes	179601-23-1	<0.00393	0.00393	mg/kg	12.17.19 02.36	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1
Xylenes, Total	1330-20-7	<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1
Total BTEX		<0.00196	0.00196	mg/kg	12.17.19 02.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	12.17.19 02.36	
1,4-Difluorobenzene	540-36-3	103	%	70-130	12.17.19 02.36	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-003	Date Collected:	12.13.19 13.15	Sample Depth:	7 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**186**	10.0	mg/kg	12.16.19 22.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110729				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	12.16.19 21.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	12.16.19 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	12.16.19 21.04	U	1
Total GRO-DRO	PHC628	<50.2	50.2	mg/kg	12.16.19 21.04	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	12.16.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	12.16.19 21.04	
o-Terphenyl	84-15-1	122	%	70-135	12.16.19 21.04	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH08**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-003	Date Collected:	12.13.19 13.15	Sample Depth:	7 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1
Toluene	108-88-3	<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1
Ethylbenzene	100-41-4	<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1
m,p-Xylenes	179601-23-1	<0.00393	0.00393	mg/kg	12.17.19 02.55	U	1
o-Xylene	95-47-6	<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1
Xylenes, Total	1330-20-7	<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1
Total BTEX		<0.00196	0.00196	mg/kg	12.17.19 02.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	12.17.19 02.55	
4-Bromofluorobenzene	460-00-4	129	%	70-130	12.17.19 02.55	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-004	Date Collected:	12.13.19 13.20	Sample Depth:	8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**552**	10.0	mg/kg	12.16.19 22.09		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110737				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	12.16.19 22.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	12.16.19 22.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	12.16.19 22.04	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	12.16.19 22.04	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	12.16.19 22.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	134	%	70-135	12.16.19 22.04	
o-Terphenyl	84-15-1	144	%	70-135	12.16.19 22.04	**

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH08A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-004	Date Collected:	12.13.19 13.20	Sample Depth:	8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.17.19 03.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.17.19 03.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	128	%	70-130	12.17.19 03.14	
1,4-Difluorobenzene	540-36-3	105	%	70-130	12.17.19 03.14	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-005	Date Collected:	12.13.19 13.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1140**	10.1	mg/kg	12.16.19 22.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110737				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	12.16.19 22.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	12.16.19 22.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	12.16.19 22.24	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	12.16.19 22.24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	12.16.19 22.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	12.16.19 22.24	
o-Terphenyl	84-15-1	125	%	70-135	12.16.19 22.24	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH09**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-005	Date Collected:	12.13.19 13.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.17.19 03.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.17.19 03.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	12.17.19 03.33	
1,4-Difluorobenzene	540-36-3	102	%	70-130	12.17.19 03.33	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-006	Date Collected:	12.13.19 14.23	Sample Depth:	9 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 19.38	Basis:	Wet Weight
Seq Number:	3110716				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**303**	9.88	mg/kg	12.16.19 22.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	12.16.19 17.00	Basis:	Wet Weight
Seq Number:	3110737				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	12.16.19 22.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	12.16.19 22.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	12.16.19 22.44	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	12.16.19 22.44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	12.16.19 22.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	12.16.19 22.44	
o-Terphenyl	84-15-1	128	%	70-135	12.16.19 22.44	

Certificate of Analytical Results 646527

LT Environmental, Inc., Arvada, CO

Swearingen #1 SWD

Sample Id:	**PH09A**	Matrix:	Soil	Date Received:	12.16.19 16.10
Lab Sample Id:	646527-006	Date Collected:	12.13.19 14.23	Sample Depth:	9 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	12.16.19 17.29	Basis:	Wet Weight
Seq Number:	3110714				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.17.19 01.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.17.19 01.57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	12.17.19 01.57	
4-Bromofluorobenzene	460-00-4	111	%	70-130	12.17.19 01.57	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 646527

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110716 Matrix: Solid Date Prep: 12.16.19
MB Sample Id: 7692583-1-BLK LCS Sample Id: 7692583-1-BKS LCSD Sample Id: 7692583-1-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	265	106	264	106	90-110	0	20	mg/kg	12.16.19 21:25	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110716 Matrix: Soil Date Prep: 12.16.19
Parent Sample Id: 646527-001 MS Sample Id: 646527-001 S MSD Sample Id: 646527-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2160	199	2340	90	2330	86	90-110	0	20	mg/kg	12.16.19 21:44	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3110716 Matrix: Soil Date Prep: 12.16.19
Parent Sample Id: 646531-006 MS Sample Id: 646531-006 S MSD Sample Id: 646531-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	174	198	394	111	396	112	90-110	1	20	mg/kg	12.16.19 23:19	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3110729 Matrix: Solid Date Prep: 12.16.19
MB Sample Id: 7692584-1-BLK LCS Sample Id: 7692584-1-BKS LCSD Sample Id: 7692584-1-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	1110	111	1140	114	70-135	3	35	mg/kg	12.16.19 17:07	
Diesel Range Organics (DRO)	<50.0	1000	1190	119	1200	120	70-135	1	35	mg/kg	12.16.19 17:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		129		130		70-135	%	12.16.19 17:07
o-Terphenyl	135		130		133		70-135	%	12.16.19 17:07

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

QC Summary 646527

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110737 — Matrix: Solid — Date Prep: 12.16.19
MB Sample Id: 7692589-1-BLK — LCS Sample Id: 7692589-1-BKS — LCSD Sample Id: 7692589-1-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	1010	101	978	98	70-135	3	35	mg/kg	12.16.19 21:44	
Diesel Range Organics (DRO)	<50.0	1000	861	86	840	84	70-135	2	35	mg/kg	12.16.19 21:44	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		114		112		70-135	%	12.16.19 21:44
o-Terphenyl	128		99		95		70-135	%	12.16.19 21:44

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110729 — Matrix: Solid — Date Prep: 12.16.19
MB Sample Id: 7692584-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.16.19 17:07	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110737 — Matrix: Solid — Date Prep: 12.16.19
MB Sample Id: 7692589-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	12.16.19 21:24	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110729 — Matrix: Soil — Date Prep: 12.16.19
Parent Sample Id: 646503-004 — MS Sample Id: 646503-004 S — MSD Sample Id: 646503-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	1310	131	1140	113	70-135	14	35	mg/kg	12.16.19 17:47	
Diesel Range Organics (DRO)	<11.5	1000	1430	143	1020	101	70-135	33	35	mg/kg	12.16.19 17:47	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	129		116		70-135	%	12.16.19 17:47
o-Terphenyl	134		96		70-135	%	12.16.19 17:47

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

QC Summary 646527

LT Environmental, Inc.

Swearingen #1 SWD

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3110737 — Matrix: Soil — Date Prep: 12.16.19
Parent Sample Id: 646527-004 — MS Sample Id: 646527-004 S — MSD Sample Id: 646527-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	926	93	981	98	70-135	6	35	mg/kg	12.16.19 22:04	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	859	86	70-135	19	35	mg/kg	12.16.19 22:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		117		70-135	%	12.16.19 22:04
o-Terphenyl	97		104		70-135	%	12.16.19 22:04

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3110714 — Matrix: Solid — Date Prep: 12.16.19
MB Sample Id: 7692580-1-BLK — LCS Sample Id: 7692580-1-BKS — LCSD Sample Id: 7692580-1-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	0.0910	91	0.0961	96	70-130	5	35	mg/kg	12.17.19 00:15	
Toluene	<0.00200	0.100	0.0926	93	0.0984	98	70-130	6	35	mg/kg	12.17.19 00:15	
Ethylbenzene	<0.00200	0.100	0.0920	92	0.0974	97	71-129	6	35	mg/kg	12.17.19 00:15	
m,p-Xylenes	<0.00400	0.200	0.194	97	0.206	103	70-135	6	35	mg/kg	12.17.19 00:15	
o-Xylene	<0.00200	0.100	0.0979	98	0.105	105	71-133	7	35	mg/kg	12.17.19 00:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		102		104		70-130	%	12.17.19 00:15
4-Bromofluorobenzene	102		114		119		70-130	%	12.17.19 00:15

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3110714 — Matrix: Soil — Date Prep: 12.16.19
Parent Sample Id: 646527-006 — MS Sample Id: 646527-006 S — MSD Sample Id: 646527-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.104	105	0.0936	94	70-130	11	35	mg/kg	12.17.19 00:54	
Toluene	<0.00198	0.0992	0.107	108	0.0956	96	70-130	11	35	mg/kg	12.17.19 00:54	
Ethylbenzene	<0.00198	0.0992	0.105	106	0.0944	95	71-129	11	35	mg/kg	12.17.19 00:54	
m,p-Xylenes	<0.00397	0.198	0.222	112	0.199	100	70-135	11	35	mg/kg	12.17.19 00:54	
o-Xylene	<0.00198	0.0992	0.113	114	0.101	102	71-133	11	35	mg/kg	12.17.19 00:54	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		104		70-130	%	12.17.19 00:54
4-Bromofluorobenzene	120		121		70-130	%	12.17.19 00:54

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

XENCO LABORATORIES

Chain of Custody

Work Order No: 641527

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Manager:	Chris McKisson	Bill to: (if different)	→
Company Name:	LT Environmental	Company Name:	→
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com tabyers@ltenv.com

Work Order Comments

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

Project Name:	Swearingen #1 SWD	Turn Around	
Project Number:	034819838	Routine ☐	
Project Location	Rural Eddy County	Rush: 24 HR	
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.4	Thermometer ID	T-NM-007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	6

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	PH05	S	12/13/19	0950	4'	1	X	X	X	
	PH05A	S		1000	6'	1				
	PH06	S		1315	7'	1				
	PH06A	S		1320	8'	1				
	PH07	S		1345	2'	1				
	PH07A	S	↓	1423	9'	1				

Total 200.7 / 6010 200.8 / 6020:
Circle Method(s) and Metal(s) to be analyzed

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

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Anna Byers		12/14/19 10:10	2		
			4		
			6		

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 12/16/2019 04:10:00 PM

Work Order #: 646527

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.4
#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**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 12/16/2019

Checklist reviewed by: Jessica Kramer Date: 12/17/2019

Analytical Report 657712

for

LT Environmental, Inc.

Project Manager: Chris McKisson

Swearingen SWD#1

034819038

04.06.2020

Collected By: Client

1089 N Canal Street
Carlsbad, NM 88220

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

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

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

04.06.2020

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

Reference: XENCO Report No(s): **657712**
Swearingen SWD#1
Project Address: Eddy County

Chris McKisson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 657712. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 657712 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB01	S	04.01.2020 09:22	10 - 12.2 ft	657712-001
SB02	S	04.01.2020 12:00	10 - 12.2 ft	657712-002
SB03	S	04.01.2020 13:20	2 - 3.5 ft	657712-003
SB03A	S	04.01.2020 14:25	10 - 10.5 ft	657712-004
SB04	S	04.01.2020 15:00	2 - 2.3 ft	657712-005
SB04A	S	04.01.2020 15:27	10 - 10.5 ft	657712-006
SB05	S	04.02.2020 09:30	2 - 3.5 ft	657712-007
SB05A	S	04.02.2020 09:45	10 - 10.3 ft	657712-008
SB06	S	04.02.2020 08:45	2 - 2.5 ft	657712-009
SB06A	S	04.02.2020 09:05	10 - 10.5 ft	657712-010

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Swearingen SWD#1

Project ID: *034819038*
Work Order Number(s): *657712*

Report Date: *04.06.2020*
Date Received: *04.02.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3121960 BTEX by EPA 8021B

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

Certificate of Analysis Summary 657712

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen SWD#1

Project Id: 034819038
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Thu 04.02.2020 11:00
Report Date: 04.06.2020 13:49
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	657712-001		657712-002		657712-003		657712-004		657712-005		657712-006	
	Field Id:	SB01		SB02		SB03		SB03A		SB04		SB04A	
	Depth:	10-12.2 ft		10-12.2 ft		2-3.5 ft		10-10.5 ft		2-2.3 ft		10-10.5 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.01.2020 09:22		04.01.2020 12:00		04.01.2020 13:20		04.01.2020 14:25		04.01.2020 15:00		04.01.2020 15:27	
BTEX by EPA 8021B	***Extracted:***	04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40	
	Analyzed:	04.04.2020 20:55		04.04.2020 21:15		04.04.2020 21:36		04.04.2020 22:57		04.04.2020 23:18		04.04.2020 23:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00400	0.00400	<0.00396	0.00396	<0.00398	0.00398	<0.00404	0.00404	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Xylenes, Total		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05	
	Analyzed:	04.04.2020 18:48		04.04.2020 19:08		04.04.2020 19:14		04.04.2020 19:20		04.04.2020 19:27		04.04.2020 19:46	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1130	9.94	1570	9.98	1770	9.94	520	9.92	1670	9.94	358	9.98
TPH by SW8015 Mod	***Extracted:***	04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15	
	Analyzed:	04.06.2020 03:59		04.06.2020 04:19		04.06.2020 04:39		04.06.2020 05:20		04.06.2020 05:40		04.06.2020 06:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.0	50.0	<50.1	50.1
Diesel Range Organics (DRO)		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.0	50.0	<50.1	50.1
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.0	50.0	<50.1	50.1
Total GRO-DRO		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.0	50.0	<50.1	50.1
Total TPH		<50.1	50.1	<49.9	49.9	<50.3	50.3	<50.3	50.3	<50.0	50.0	<50.1	50.1

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

Jessica Kramer
Project Manager

Certificate of Analysis Summary 657712

LT Environmental, Inc., Arvada, CO

Project Name: Swearingen SWD#1

Project Id: 034819038
Contact: Chris McKisson
Project Location: Eddy County

Date Received in Lab: Thu 04.02.2020 11:00
Report Date: 04.06.2020 13:49
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	657712-007		657712-008		657712-009		657712-010					
	Field Id:	SB05		SB05A		SB06		SB06A					
	Depth:	2-3.5 ft		10-10.3 ft		2-2.5 ft		10-10.5 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	04.02.2020 09:30		04.02.2020 09:45		04.02.2020 08:45		04.02.2020 09:05					
BTEX by EPA 8021B	***Extracted:***	04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40		04.04.2020 13:40					
	Analyzed:	04.04.2020 23:59		04.05.2020 00:19		04.05.2020 00:39		04.05.2020 01:00					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Toluene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399	<0.00396	0.00396	<0.00395	0.00395	<0.00401	0.00401				
o-Xylene		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Xylenes, Total		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Total BTEX		<0.00200	0.00200	<0.00198	0.00198	<0.00198	0.00198	<0.00200	0.00200				
Chloride by EPA 300	***Extracted:***	04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05		04.04.2020 10:05					
	Analyzed:	04.04.2020 19:52		04.04.2020 19:59		04.04.2020 20:05		04.04.2020 20:12					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		340	10.0	551	9.98	4420	50.2	919	9.98				
TPH by SW8015 Mod	***Extracted:***	04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15		04.03.2020 18:15					
	Analyzed:	04.06.2020 06:20		04.06.2020 06:40		04.06.2020 07:01		04.06.2020 07:21					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9	<50.1	50.1	<49.9	49.9	<49.9	49.9				
Diesel Range Organics (DRO)		<49.9	49.9	<50.1	50.1	<49.9	49.9	<49.9	49.9				
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<50.1	50.1	<49.9	49.9	<49.9	49.9				
Total GRO-DRO		<49.9	49.9	<50.1	50.1	<49.9	49.9	<49.9	49.9				
Total TPH		<49.9	49.9	<50.1	50.1	<49.9	49.9	<49.9	49.9				

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

Jessica Kramer
Project Manager

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB01**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-001	Date Collected:	04.01.2020 09:22	Sample Depth:	10 - 12.2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1130**	9.94	mg/kg	04.04.2020 18:48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.06.2020 03:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.06.2020 03:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.06.2020 03:59	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.06.2020 03:59	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.06.2020 03:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.06.2020 03:59	
o-Terphenyl	84-15-1	107	%	70-135	04.06.2020 03:59	

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB01**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-001	Date Collected:	04.01.2020 09:22	Sample Depth:	10 - 12.2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.04.2020 20:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.04.2020 20:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	04.04.2020 20:55	
4-Bromofluorobenzene	460-00-4	91	%	70-130	04.04.2020 20:55	

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB02**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-002	Date Collected:	04.01.2020 12:00	Sample Depth:	10 - 12.2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1570**	9.98	mg/kg	04.04.2020 19:08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.06.2020 04:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.06.2020 04:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.06.2020 04:19	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.06.2020 04:19	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.06.2020 04:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.06.2020 04:19	
o-Terphenyl	84-15-1	108	%	70-135	04.06.2020 04:19	

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB02**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-002	Date Collected:	04.01.2020 12:00	Sample Depth:	10 - 12.2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.04.2020 21:15	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.04.2020 21:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.04.2020 21:15	
4-Bromofluorobenzene	460-00-4	97	%	70-130	04.04.2020 21:15	

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB03**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-003	Date Collected:	04.01.2020 13:20	Sample Depth:	2 - 3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1770**	9.94	mg/kg	04.04.2020 19:14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.06.2020 04:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	04.06.2020 04:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.06.2020 04:39	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	04.06.2020 04:39	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	04.06.2020 04:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	04.06.2020 04:39	
o-Terphenyl	84-15-1	115	%	70-135	04.06.2020 04:39	

Certificate of Analytical Results 657712

LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB03**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-003	Date Collected:	04.01.2020 13:20	Sample Depth:	2 - 3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.04.2020 21:36	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.04.2020 21:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.04.2020 21:36	
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.04.2020 21:36	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB03A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-004	Date Collected:	04.01.2020 14:25	Sample Depth:	10 - 10.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**520**	9.92	mg/kg	04.04.2020 19:20		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.3	50.3	mg/kg	04.06.2020 05:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.3	50.3	mg/kg	04.06.2020 05:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	04.06.2020 05:20	U	1
Total GRO-DRO	PHC628	<50.3	50.3	mg/kg	04.06.2020 05:20	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	04.06.2020 05:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.06.2020 05:20	
o-Terphenyl	84-15-1	101	%	70-135	04.06.2020 05:20	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB03A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-004	Date Collected:	04.01.2020 14:25	Sample Depth:	10 - 10.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	04.04.2020 22:57	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1
Xylenes, Total	1330-20-7	<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.04.2020 22:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.04.2020 22:57	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.04.2020 22:57	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB04**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-005	Date Collected:	04.01.2020 15:00	Sample Depth:	2 - 2.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1670**	9.94	mg/kg	04.04.2020 19:27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	04.06.2020 05:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	04.06.2020 05:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	04.06.2020 05:40	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	04.06.2020 05:40	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	04.06.2020 05:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.06.2020 05:40	
o-Terphenyl	84-15-1	109	%	70-135	04.06.2020 05:40	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB04**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-005	Date Collected:	04.01.2020 15:00	Sample Depth:	2 - 2.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.04.2020 23:18	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.04.2020 23:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.04.2020 23:18	
1,4-Difluorobenzene	540-36-3	108	%	70-130	04.04.2020 23:18	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB04A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-006	Date Collected:	04.01.2020 15:27	Sample Depth:	10 - 10.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**358**	9.98	mg/kg	04.04.2020 19:46		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.06.2020 06:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.06.2020 06:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.06.2020 06:00	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.06.2020 06:00	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.06.2020 06:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.06.2020 06:00	
o-Terphenyl	84-15-1	109	%	70-135	04.06.2020 06:00	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB04A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-006	Date Collected:	04.01.2020 15:27	Sample Depth:	10 - 10.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.04.2020 23:38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1
Xylenes, Total	1330-20-7	<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.04.2020 23:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.04.2020 23:38	
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.04.2020 23:38	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB05**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-007	Date Collected:	04.02.2020 09:30	Sample Depth:	2 - 3.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**340**	10.0	mg/kg	04.04.2020 19:52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.06.2020 06:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.06.2020 06:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.06.2020 06:20	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.06.2020 06:20	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.06.2020 06:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.06.2020 06:20	
o-Terphenyl	84-15-1	104	%	70-135	04.06.2020 06:20	

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Swearingen SWD#1

Sample Id:	**SB05**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-007	Date Collected:	04.02.2020 09:30	Sample Depth:	2 - 3.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.04.2020 23:59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.04.2020 23:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.04.2020 23:59	
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.04.2020 23:59	

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Swearingen SWD#1

Sample Id:	**SB05A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-008	Date Collected:	04.02.2020 09:45	Sample Depth:	10 - 10.3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**551**	9.98	mg/kg	04.04.2020 19:59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	04.06.2020 06:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	04.06.2020 06:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	04.06.2020 06:40	U	1
Total GRO-DRO	PHC628	<50.1	50.1	mg/kg	04.06.2020 06:40	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	04.06.2020 06:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.06.2020 06:40	
o-Terphenyl	84-15-1	107	%	70-135	04.06.2020 06:40	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB05A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-008	Date Collected:	04.02.2020 09:45	Sample Depth:	10 - 10.3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	04.05.2020 00:19	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.05.2020 00:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	04.05.2020 00:19	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.05.2020 00:19	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB06**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-009	Date Collected:	04.02.2020 08:45	Sample Depth:	2 - 2.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**4420**	50.2	mg/kg	04.04.2020 20:05		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.06.2020 07:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.06.2020 07:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.06.2020 07:01	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.06.2020 07:01	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.06.2020 07:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.06.2020 07:01	
o-Terphenyl	84-15-1	106	%	70-135	04.06.2020 07:01	

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Swearingen SWD#1

Sample Id:	**SB06**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-009	Date Collected:	04.02.2020 08:45	Sample Depth:	2 - 2.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1
m,p-Xylenes	179601-23-1	<0.00395	0.00395	mg/kg	04.05.2020 00:39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1
Xylenes, Total	1330-20-7	<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.05.2020 00:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	106	%	70-130	04.05.2020 00:39	
4-Bromofluorobenzene	460-00-4	92	%	70-130	04.05.2020 00:39	

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Swearingen SWD#1

Sample Id:	**SB06A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-010	Date Collected:	04.02.2020 09:05	Sample Depth:	10 - 10.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 10:05	Basis:	Wet Weight
Seq Number:	3121982				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**919**	9.98	mg/kg	04.04.2020 20:12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	SW8015P
Tech:	DTH			% Moisture:	
Analyst:	DTH	Date Prep:	04.03.2020 18:15	Basis:	Wet Weight
Seq Number:	3122009				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	04.06.2020 07:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	04.06.2020 07:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	04.06.2020 07:21	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	04.06.2020 07:21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	04.06.2020 07:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.06.2020 07:21	
o-Terphenyl	84-15-1	108	%	70-135	04.06.2020 07:21	

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LT Environmental, Inc., Arvada, CO

Swearingen SWD#1

Sample Id:	**SB06A**	Matrix:	Soil	Date Received:	04.02.2020 11:00
Lab Sample Id:	657712-010	Date Collected:	04.02.2020 09:05	Sample Depth:	10 - 10.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	MAB			% Moisture:	
Analyst:	MAB	Date Prep:	04.04.2020 13:40	Basis:	Wet Weight
Seq Number:	3121960				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.05.2020 01:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1
Xylenes, Total	1330-20-7	<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.05.2020 01:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.05.2020 01:00	
1,4-Difluorobenzene	540-36-3	107	%	70-130	04.05.2020 01:00	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 657712

LT Environmental, Inc.

Swearingen SWD#1

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121982 — Matrix: Solid — Date Prep: 04.04.2020
MB Sample Id: 7700529-1-BLK — LCS Sample Id: 7700529-1-BKS — LCSD Sample Id: 7700529-1-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	265	106	265	106	90-110	0	20	mg/kg	04.04.2020 18:36	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121982 — Matrix: Soil — Date Prep: 04.04.2020
Parent Sample Id: 657712-001 — MS Sample Id: 657712-001 S — MSD Sample Id: 657712-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1130	199	1320	95	1330	100	90-110	1	20	mg/kg	04.04.2020 18:55	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3121982 — Matrix: Soil — Date Prep: 04.04.2020
Parent Sample Id: 657765-004 — MS Sample Id: 657765-004 S — MSD Sample Id: 657765-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	626	198	822	99	822	99	90-110	0	20	mg/kg	04.04.2020 20:25	

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122009 — Matrix: Solid — Date Prep: 04.03.2020
MB Sample Id: 7700582-1-BLK — LCS Sample Id: 7700582-1-BKS — LCSD Sample Id: 7700582-1-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	1030	103	1020	102	70-135	1	35	mg/kg	04.06.2020 00:17	
Diesel Range Organics (DRO)	<50.0	1000	1120	112	1110	111	70-135	1	35	mg/kg	04.06.2020 00:17	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		127		118		70-135	%	04.06.2020 00:17
o-Terphenyl	115		122		118		70-135	%	04.06.2020 00:17

Analytical Method: TPH by SW8015 Mod — Prep Method: SW8015P
Seq Number: 3122009 — Matrix: Solid — Date Prep: 04.03.2020
MB Sample Id: 7700582-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	04.04.2020 01:12	

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

QC Summary 657712

LT Environmental, Inc.

Swearingen SWD#1

Analytical Method: **TPH by SW8015 Mod** Prep Method: SW8015P
Seq Number: 3122009 Matrix: Soil Date Prep: 04.03.2020
Parent Sample Id: 657686-001 MS Sample Id: 657686-001 S MSD Sample Id: 657686-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.2	1000	987	99	989	99	70-135	0	35	mg/kg	04.06.2020 01:17	
Diesel Range Organics (DRO)	<50.2	1000	1040	104	1050	105	70-135	1	35	mg/kg	04.06.2020 01:17	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		118		70-135	%	04.06.2020 01:17
o-Terphenyl	112		114		70-135	%	04.06.2020 01:17

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3121960 Matrix: Solid Date Prep: 04.04.2020
MB Sample Id: 7700538-1-BLK LCS Sample Id: 7700538-1-BKS LCSD Sample Id: 7700538-1-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	0.103	103	0.102	102	70-130	1	35	mg/kg	04.04.2020 16:50	
Toluene	<0.00200	0.100	0.0971	97	0.0964	96	70-130	1	35	mg/kg	04.04.2020 16:50	
Ethylbenzene	<0.00200	0.100	0.0912	91	0.0899	90	71-129	1	35	mg/kg	04.04.2020 16:50	
m,p-Xylenes	<0.00400	0.200	0.186	93	0.184	92	70-135	1	35	mg/kg	04.04.2020 16:50	
o-Xylene	<0.00200	0.100	0.0949	95	0.0949	95	71-133	0	35	mg/kg	04.04.2020 16:50	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		106		104		70-130	%	04.04.2020 16:50
4-Bromofluorobenzene	92		93		91		70-130	%	04.04.2020 16:50

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3121960 Matrix: Soil Date Prep: 04.04.2020
Parent Sample Id: 657371-008 MS Sample Id: 657371-008 S MSD Sample Id: 657371-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0922	91	0.105	105	70-130	13	35	mg/kg	04.04.2020 17:31	
Toluene	<0.00202	0.101	0.0892	88	0.0990	99	70-130	10	35	mg/kg	04.04.2020 17:31	
Ethylbenzene	<0.00202	0.101	0.0845	84	0.0920	92	71-129	8	35	mg/kg	04.04.2020 17:31	
m,p-Xylenes	<0.00404	0.202	0.174	86	0.188	94	70-135	8	35	mg/kg	04.04.2020 17:31	
o-Xylene	<0.00202	0.101	0.0881	87	0.0958	96	71-133	8	35	mg/kg	04.04.2020 17:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		104		70-130	%	04.04.2020 17:31
4-Bromofluorobenzene	93		91		70-130	%	04.04.2020 17:31

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

Chain of Custody

Work Order No: 057712

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 www.xenco.com

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Project Manager:	Chris McKisson	Bill to: (if different)	
Company Name:	LT Environmental	Company Name:	
Address:	820 Megan Ave, Unit B	Address:	
City, State ZIP:	Rifle, CO 81650	City, State ZIP:	
Phone:	970 285 9985	Email:	cmckisson@ltenv.com, abyers@ltenv.com

Work Order Comments

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

Project Name:	Swearingen SWD #1	Turn Around	
Project Number:	03481908	Routine ☐	
Project Location	Eddy County	Rush: 3 DAY	
Sampler's Name:	Anna Byers	Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT			
Temp Blank:	(Yes) No	Wet Ice:	(Yes) No
Temperature (°C):	1.5	Thermometer ID	TNM007
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	10

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Pres. Code	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)
	SB01	S	4/1/20	0922	10-12.2'	1		X	X	X
	SB02			1200	10-12.2'	1		X	X	X
	SB03			1320	2-3.5'	1		X	X	X
	SB03A			1425	10-10.5'	1		X	X	X
	SB04			1500	2-2.3'	1		X	X	X
	SB04A			1527	10-10.5'	1		X	X	X
	SB05		4/2/20	0930	2-3.5'	1		X	X	X
	SB05A			0945	10-10.5'	1		X	X	X
	SB06			0845	2-2.5'	1		X	X	X
	SB06A			0905	10-10.5'	1		X	X	X

ANALYSIS REQUEST

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Sample Comments

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

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

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Anna Byers		4/2/20 11:00			
3				4		
5			4/2/20			

Revised Date 022619 Rev. 2019.1

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 04.02.2020 11.00.00 AM

Work Order #: 657712

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

Temperature Measuring device used : T-NM-007

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Elizabeth McClellan Date: 04.02.2020

Checklist reviewed by: Jessica Kramer Date: 04.03.2020

Jessica Kramer