



LT Environmental, Inc.

3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

APPROVED

March 20, 2020

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 South St. Francis Drive, #3
Santa Fe, New Mexico 87505

The OCD approves the Closure Report C-141 for incident #NIMW1231129593 with the following conditions.

- Depth to groundwater is not adequately identified. When nearby wells are used to determine depth to groundwater, the wells should be no further than 1/2 mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a 1/2 mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less.
- This release does appear to have been vertically and horizontally defined to 4' and does appear to meet the strictest remediation requirements in Table 1 19.15.29.12 NMAC.

**RE: Closure Request
Poker Lake Unit Delaware C Saltwater Disposal Battery/Delaware C Tank Battery
Remediation Permit Numbers 2RP-1205, 2RP-1304, 2RP-1305, 2RP-1383, and
2RP-2264
Eddy County, New Mexico**

Dear Mr. Billings:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Closure Request detailing site assessment and soil sampling activities at the Poker Lake Unit (PLU) Delaware C Saltwater Disposal (SWD) Battery/Delaware C Tank Battery (Site) in Unit G, Section 6, Township 24 South, Range 30 East, Eddy County, New Mexico (Figure 1). The purpose of the site assessment and soil sampling activities was to assess for the presence or absence of impacted soil resulting from five historical releases of crude oil and/or produced water at the Site. Based on the assessment activities and results of the soil sampling events, XTO is submitting this Closure Request, requesting no further action for the release events.

The releases are included in the Compliance Agreement for Remediation for Historical Releases (Compliance Agreement) between XTO and the New Mexico Oil Conservation Division (NMOCD) effective November 13, 2018. The purpose of the Compliance Agreement is to ensure reportable releases that occurred prior to August 14, 2018, where XTO is responsible for the corrective action, comply with Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC) as amended on August 14, 2018. The releases are categorized as Tier IV sites in the Compliance Agreement, meaning the releases occurred prior to August 14, 2018, the effective date of 19.15.29 NMAC; however, remediation was ongoing.

RELEASE BACKGROUND

On May 30, 2012, a pipe fitting on the discharge line from SWD pump broke and caused the release of approximately 25 barrels (bbls) of produced water. Approximately 1,960 square feet of pasture west of the tank battery was affected by the release. No released fluids were recovered. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 (Form C-141) on June 24, 2012 and was assigned Remediation Permit (RP) Number 2RP-1205 (Attachment 1).



On August 18, 2012, the water transfer pumps failed, causing produced water tanks to overflow. Approximately 10 bbls of crude oil and 20 bbls of produced water were released. Approximately 900 square feet of the tank battery containment and 2,000 square feet of pasture west of the tank battery were affected by the release. No released fluids were recovered. Approximately 40 cubic yards of impacted soil were excavated from the containment. The excavation was sampled, backfilled, and a liner was installed. The former operator reported the release to the NMOCD on a Form C-141 on September 5, 2012 and was assigned RP Number 2RP-1305 (Attachment 1).

On September 2, 2012, the truck load line valve was left open, allowing approximately 200 bbls of produced water to spill onto the surface of the caliche pad. Approximately 11,770 square feet of pad and lease road, and 7,060 square feet of pasture were affected by the release. A vacuum truck recovered 5 bbls of free-standing fluid, and a backhoe was used to scrape up the saturated soil. The former operator reported the release to the NMOCD on a Form C-141 on September 5, 2012 and was assigned RP Number 2RP-1304 (Attachment 1).

On September 19, 2012, a connection going from the charge pumps to the H-pump failed. The pumps were shut down upon discovery. Approximately 650 bbls of produced water were released; no released fluids were recovered. The well pad, lease road, and adjacent pasture were affected by the release. Delineation activities were scheduled to determine the extent of impacted soil at the Site. The former operator reported the release to the NMOCD on a Form C-141 on September 28, 2012 and was assigned RP Number 2RP-1383 (Attachment 1).

On April 21, 2014, a high-pressure fiberglass line coupling broke at the threads, causing approximately 200 bbls of produced water to release. A vacuum truck recovered approximately 15 bbls of produced water. Approximately 4,000 square feet of caliche pad, 1,300 square feet of lease road, and 4,200 square feet of pasture were affected by the release. Remediation of all releases was scheduled to take place during the upcoming SWD dismantling and tank battery relocation activities. The former operator reported the release to the NMOCD on a Form C-141 on April 24, 2014 and was assigned RP Number 2RP-2264 (Attachment 1).

Although all five of the releases occurred while the facility was operated by the previous operator, XTO is the current operator and is committed to addressing any releases that remain unresolved. Since the releases occurred in the same general area of the well pad, lease road, and pasture, site assessment and soil sampling activities were completed to address and close all five releases simultaneously. The initial Form C-141s indicated that soil excavation activities had occurred and that additional remediation activities were scheduled for 2014.

SITE CHARACTERIZATION

LTE characterized the Site according to Table 1, *Closure Criteria for Soils Impacted by a Release*, of 19.15.29.12 of the NMAC. Depth to groundwater at the Site is estimated to be greater than 100 feet below ground surface (bgs) based on the nearest water well data. The nearest permitted



groundwater well with depth to groundwater data is New Mexico Office of State Engineer (NMOSE) well C-02108, located approximately 1.34 miles southeast of the Site. The water well has a depth to groundwater of 186 feet bgs and a total depth of 200 feet bgs. The closest continuously flowing water or significant watercourse to the Site is an unnamed dry wash located approximately 1,590 feet northwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low-potential karst area.

CLOSURE CRITERIA

- Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:
- Benzene: 10 milligrams per kilogram (mg/kg);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg;
- TPH-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg;
- Total petroleum hydrocarbons (TPH): 2,500 mg/kg; and
- Chloride: 20,000 mg/kg.

A closure criteria of 600 mg/kg chloride was applied to the pasture area that was impacted by the release, per NMAC 19.15.29.13.D (1) for the top 4 feet of areas that will be reclaimed following remediation.

SITE ASSESSMENT AND DELINEATION SOIL SAMPLING ACTIVITIES

During February and August 2018, LTE inspected the Site to evaluate the release areas associated with the five historical releases. Sixteen preliminary soil samples (SS1 through SS16) were collected within and around the release areas to assess the lateral extent of impacted soil. The soil sample locations, depicted on Figure 2, were selected based on information provided on the initial Form C-141 and field observations. To eliminate the effects from weathering and natural degradation of contaminants at the ground surface, soil samples SS3 through SS5 and SS7 through SS16 were collected from a depth of 0.5 feet bgs.

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



range organics (ORO) following USEPA Method 8015M/D; and chloride following USEPA Method 300.0. The soil sample locations are depicted on Figure 2.

Between August 2018 and October 2019, LTE personnel returned to the Site to oversee additional site assessment activities.

Boreholes and potholes and were advanced via track hoe or hand auger at 24 locations on the well pad, lease road, and pasture to assess the lateral and vertical extent impacted soil. Boreholes BH01 through BH16 were advanced to depths ranging from 2 feet to 14 feet bgs at the approximate locations of preliminary soil samples SS01 through SS16. Potholes PH17 through PH24 were advanced to a depth of 2 feet bgs within the well pad release area. Potholes PH18, PH19, and PH20 were advanced in the area around preliminary soil sample SS7 where hydrocarbon impacted soil was initially identified. Delineation soil samples were collected from each borehole and pothole from depths ranging from 2 feet to 14 feet bgs. Soil from the boreholes and potholes was field screened for volatile aromatic hydrocarbons and chloride utilizing a calibrated photoionization detector (PID) and Hach® chloride QuanTab® test strips, respectively. Field screening results and observations for the boreholes and potholes were logged on lithologic/soil sampling logs, which are included in Attachment 2. The delineation soil sample locations are depicted on Figure 3.

The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco. Photographic documentation was conducted during the Site visits. Photographs are included in Attachment 3.

ANALYTICAL RESULTS

Laboratory analytical results for preliminary soil samples SS1 through SS6 and SS08 through SS16, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the Closure Criteria in preliminary soil sample SS7, collected on the well pad from a depth of 0.5 feet bgs.

Laboratory analytical results for the delineation soil samples collected from boreholes BH01 through BH16 and potholes PH17 through PH24, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria.

Laboratory analytical results indicated that chloride concentrations were below 600 mg/kg in soil samples SS3 through SS6, SS08 through SS11, and BH08 through BH12, that were collected from the top four feet of the pasture.



CLOSURE REQUEST

Site assessment and soil sampling activities were completed within the release areas on the well pad, lease road, and pasture to assess for soil impacts resulting from five historical releases at the Site. Laboratory analytical results for preliminary soil samples SS1 through SS6 and SS08 through SS16, and delineation soil samples collected from boreholes BH01 through BH16 and potholes PH17 through PH24 indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. Additionally, laboratory analytical results indicated that chloride concentrations were below 600 mg/kg in soil samples SS3 through SS6, SS08 through SS11, and BH08 through BH12, that were collected from the top four feet of the pasture.

Laboratory analytical results indicated that GRO/DRO and TPH concentrations exceeded the Closure Criteria in preliminary soil sample SS7, collected during February 2018 from a depth of 0.5 feet bgs. Preliminary soil sample SS7 was located on pad approximately 35 feet to the north of the SWD tank battery containment. During October 2019, potholes PH18, PH19, and PH20 were advanced in the area around preliminary soil sample SS7. Delineation soil samples were collected from depths of one foot and two feet bgs from each pothole. Laboratory analytical results for the delineation soil samples collected from potholes PH18, PH19, and PH20, indicated that BTEX, GRO/DRO, TPH, and chloride concentrations were compliant with the Closure Criteria. In addition, the lithologic boring logs indicated no reportable PID measurements, and no staining or petroleum odor. Based on field screening activities and laboratory analytical results, no impacted soil remained in the area around preliminary soil sample SS7.

Based on the soil sample laboratory analytical results from the site assessment activities, no further remediation was required. The historical releases occurred during 2012 and 2014. The former operator indicated on the initial Form C-141s that excavation activities had occurred, and that additional remediation of impacted soil was being scheduled. The absence of impacted soil identified during LTE's assessment activities implies that unreported remediation/excavation activities have been completed at the Site in the past by the previous operator. Additionally, vegetation in the pasture appeared healthy and consistent with the surrounding vegetation.

Initial response efforts, natural attenuation, and presumed historical excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for RP Numbers 2RP-1205, 2RP-1304, 2RP-1305, 2RP-1383, and 2RP-2264. An updated NMOCD Form C-141 for each release is included in Attachment 1.

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



Billings, B.
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Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Kevin M. Axe'.

Kevin M. Axe, P.G.
Senior Geologist

A handwritten signature in blue ink that reads 'Ashley L. Ager'.

Ashley L. Ager, P.G.
Senior Geologist

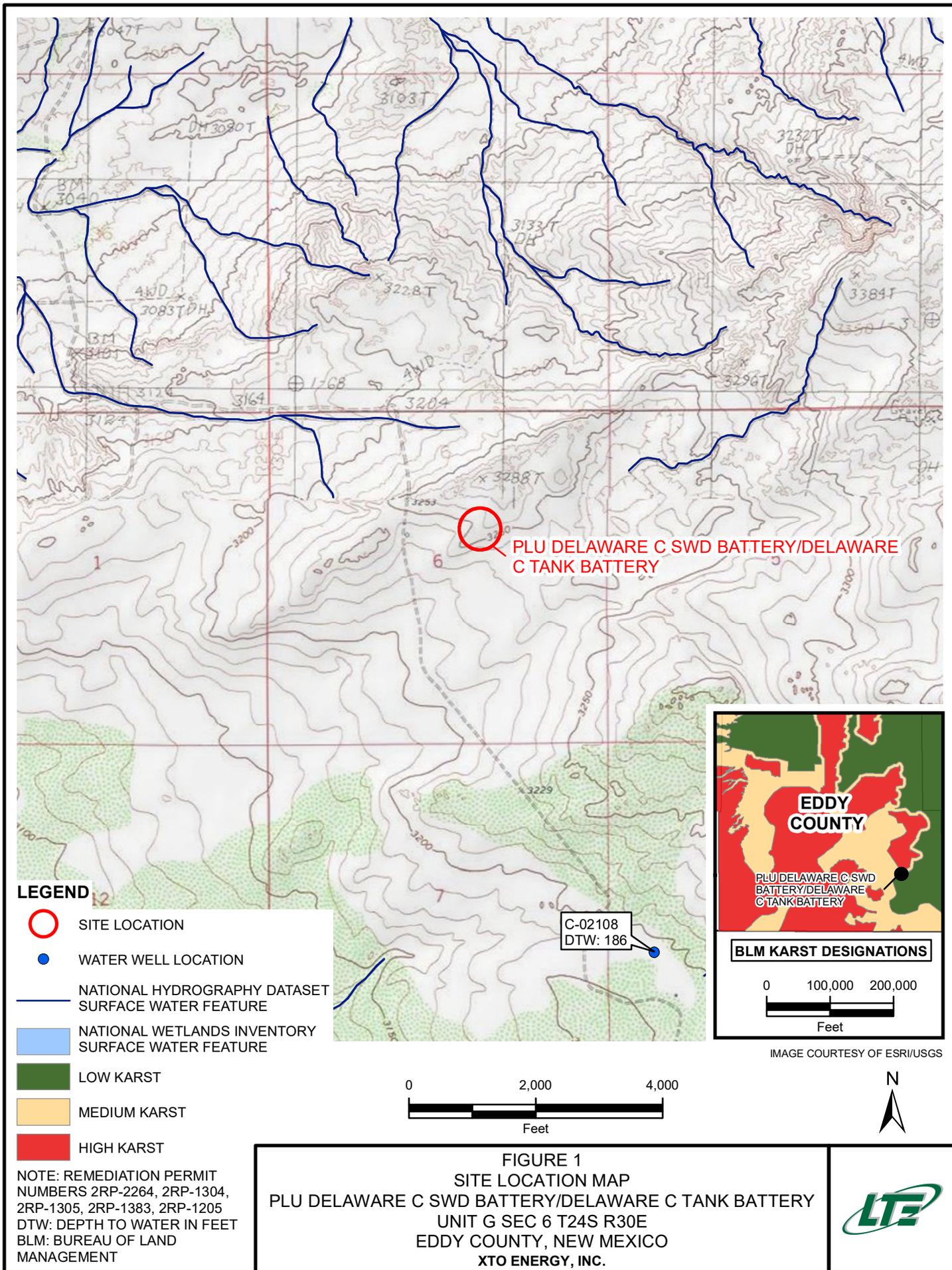
cc: Kyle Littrell, XTO
Mike Bratcher, NMOCD
Bureau of Land Management

Attachments:

- Figure 1 Site Location Map
- Figure 2 Preliminary Soil Sample Locations
- Figure 3 Delineation Soil Sample Locations
- Table 1 Soil Analytical Results
- Attachment 1 Initial/Final NMOCD Form C-141 (2RP-1205, 2RP-1304, 2RP-1305, 2RP-1383, and 2RP-2264)
- Attachment 2 Lithologic / Soil Sample Logs
- Attachment 3 Photographic Log
- Attachment 4 Laboratory Analytical Reports

FIGURES





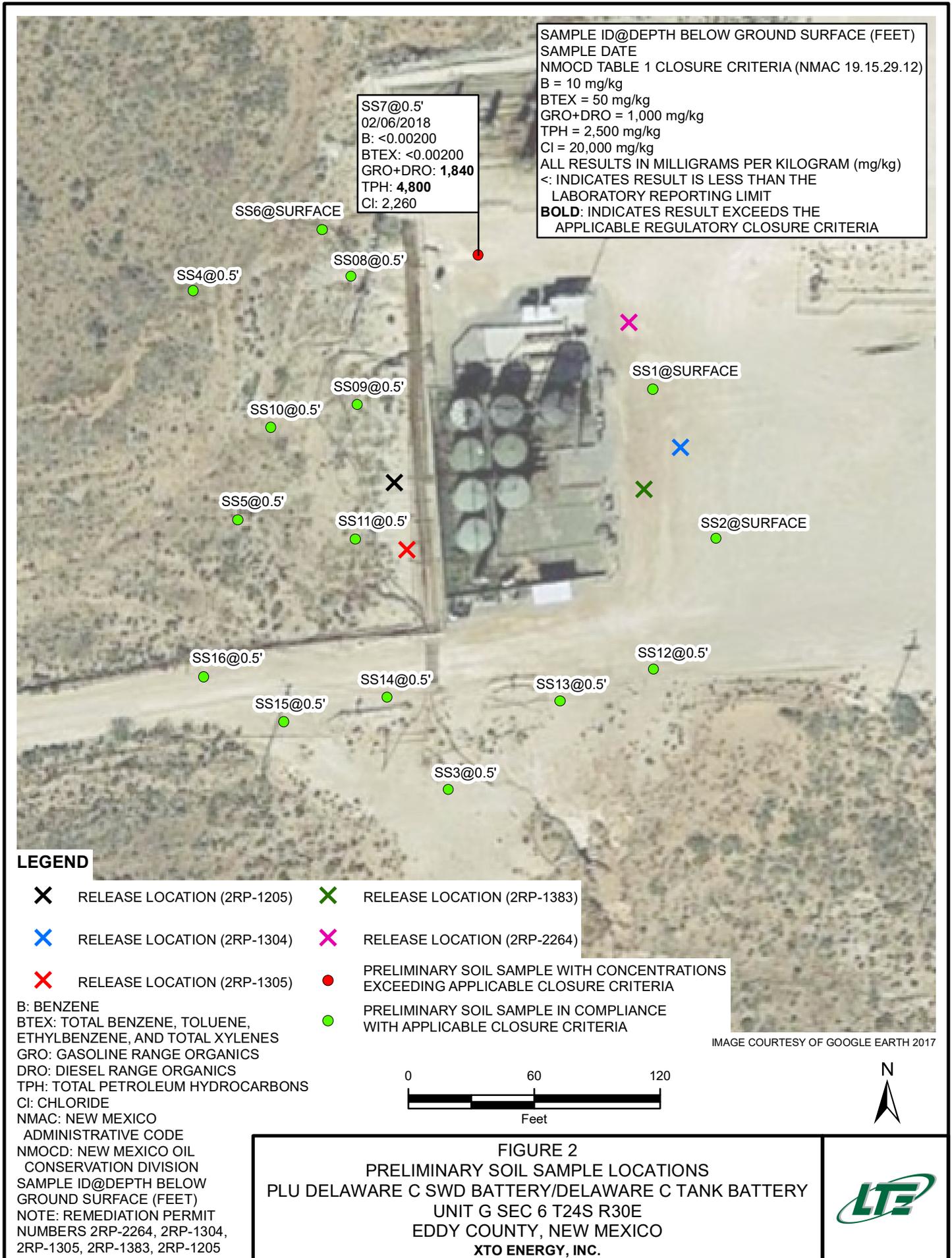




IMAGE COURTESY OF GOOGLE EARTH 2017

LEGEND

- ✕ RELEASE LOCATION (2RP-1205)
- ✕ RELEASE LOCATION (2RP-1304)
- ✕ RELEASE LOCATION (2RP-1305)
- ✕ RELEASE LOCATION (2RP-1383)
- ✕ RELEASE LOCATION (2RP-2264)
- DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

SAMPLE ID@DEPTH BELOW GROUND SURFACE (FEET)
 NOTE: REMEDIATION PERMIT NUMBERS 2RP-2264, 2RP-1304, 2RP-1305, 2RP-1383, 2RP-1205

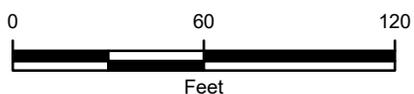


FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
 PLU DELAWARE C SWD BATTERY/DELAWARE C TANK BATTERY
 UNIT G SEC 6 T24S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



P:\XTO Energy\GIS\MXD\012918038_DELAWARE C SWD\012918038_FIG03_DELINEATION_2019.mxd

TABLES



TABLE 1
SOIL ANALYTICAL RESULTS

PLU DELAWARE C SWD BATTERY/DELAWARE C TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-1205, 2RP-1304, 2RP-1305, 2RP-1383, and 2RP-2264
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
SS1	Surface	02/06/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	58.1	37.3	58.1	95.4	2,140
SS2	Surface	02/06/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	25.2	<15.0	25.2	25.2	6,270
SS3	0.5	02/06/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	23.2*
SS4	0.5	02/06/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
SS5	0.5	02/06/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
SS6	Surface	02/06/2018	<0.00355	<0.00355	<0.00355	<0.00355	<0.00355	<15.0	<15.0	<15.0	<15.0	<15.0	<4.98*
SS7	0.5	02/06/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	1,840	410	1,840	4,800	2,260
SS08	0.5	08/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	61.9	<15.0	61.9	61.9	<1.00*
SS09	0.5	08/20/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	6.32*
SS10	0.5	08/20/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	<4.99*
SS11	0.5	08/20/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	64.4*
SS12	0.5	08/21/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	81.5	<15.0	81.5	81.5	1,800
SS13	0.5	08/21/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	15.5	<14.9	15.5	15.5	258
SS14	0.5	08/21/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	183
SS15	0.5	08/21/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	82.0
SS16	0.5	08/21/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	491
BH01	14	08/17/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	77.2
BH02	5.5	08/17/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	74.4
BH03	4	08/17/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	51.7
BH04	9.5	08/17/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	188
BH05	6	08/17/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	172
BH06	9	08/17/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	71.6
BH07	12	08/17/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	2,550
BH08	2	08/20/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	24.1*
BH09	2	08/20/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	<14.9	<14.9	<14.9	<14.9	<1.00*
BH10	2	08/20/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	3.07*
BH11	2	08/20/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	147*
BH12	2	08/20/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	500*
BH13	12	08/20/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	90.0



**TABLE 1
SOIL ANALYTICAL RESULTS**

**PLU DELAWARE C SWD BATTERY/DELAWARE C TANK BATTERY
REMEDIATION PERMIT NUMBER 2RP-1205, 2RP-1304, 2RP-1305, 2RP-1383, and 2RP-2264
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.**

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table 1 Closure Criteria			10	NE	NE	NE	50	NE	NE	NE	1,000	2,500	20,000
BH14	3	08/21/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	60.7	<15.0	60.7	60.7	317
BH15	2	08/21/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	1,080
BH16	2	08/21/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	20.6	<14.9	20.6	20.6	453
PH17	1	10/24/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<49.9	<49.9	<49.9	<49.9	<49.9	912
PH17A	2	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	577
PH18	1	10/24/2019	<0.00208	<0.00208	<0.00208	<0.00208	<0.00208	<50.0	<50.0	<50.0	<50.0	<50.0	519
PH18A	2	10/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	13.8
PH19	1	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	614
PH19A	2	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	16.3
PH20	1	10/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	579
PH20A	2	10/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<50.0	<50.0	<50.0	<50.0	<50.0	1,200
PH21	1	10/24/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	833
PH21A	2	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	1,480
PH22	1	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,060
PH22A	2	10/24/2019	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<49.9	<49.9	<49.9	<49.9	<49.9	931
PH23	1	10/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<50.0	<50.0	<50.0	<50.0	<50.0	1,260
PH23A	2	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	1,260
PH24	1	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	384
PH24A	2	10/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<50.0	<50.0	<50.0	<50.0	<50.0	319

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

DRO - diesel range organics

GRO - gasoline range organics

mg/kg - milligrams per kilogram

ORO - oil range organics

NMAC - New Mexico Administrative Code

NMOCD - New Mexico Oil Conservation Division

NE - not established

TPH - total petroleum hydrocarbons

Bold - indicates result exceeds the applicable regulatory standard

< indicates result is below laboratory reporting limits

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

* - indicates sample was collected in area to be reclaimed after remediation is complete; closure criteria for chloride concentration in the top 4 feet of soil is 600 mg/kg



A proud member of WSP

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-1205, 2RP-1305, 2RP-1304, 2RP-1383, and 2RP-2264)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

nJMW 1219345739 OPERATOR Initial Report Final Report

Name of Company BOPCO, L.P. <i>260737</i>	Contact Tony Savoie
Address 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 432-556-8730
Facility Name: Poker Lake Unit Delaware C SWD Battery	Facility Type E&P

Surface Owner Federal	Mineral Owner Federal	Lease No 891000303F <i>AP#</i>
-----------------------	-----------------------	--------------------------------

Poker Lake Unit #153 LOCATION OF RELEASE *30-015-31412*

Unit Letter G	Section 6	Township 24S	Range 30E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude N 32.248850 Longitude W 103.919067

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 25 bbls of produced water	Volume Recovered: None
Source of Release: Produced water storage tank	Date and Hour of Occurrence 5/30/12, Hour unknown	Date and Hour of Discovery 5/30/12 8:30 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD Emergency #104 and Jim Amos with the BLM	
By Whom? Tony Savoie	Date and Hour 6/1/12, NMOCD at 11:41 a.m. BLM at 11:45 a.m. The report was delayed due to a medical situation with T.S.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A pipe fitting on the discharge line from the SWD pump broke, the pipe connection was replaced the same day.

Describe Area Affected and Cleanup Action Taken.. Approximately 1960 sq.ft. of pasture land was impacted west of the tank battery, this area has had several flow line spills in the same area that the release covered. All of the fluid soaked into the ground before it could be recovered. A remediation plan will be developed in accordance with the NMOCD and BLM remediation guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Tony Savoie</i>	OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie	Approved by District Supervisor:	Signed By <i>Mike Beaman</i>
Title: Waste Mgmt. & Remediation Specialist	Approval Date: JUL 11 2012	Expiration Date:
E-mail Address: TASavoie@BassPet.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 6/24/12	Phone: 432-556-8730	

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:**

8/11/12

2RP-1205
RECEIVED
JUN 26 2012
NMOCD ARTESIA

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	
District RP	2RP-1205
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-1205
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248850 Longitude -103.919067
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Poker Lake Unit Delaware C SWD Battery	Site Type Exploration and Production
Date Release Discovered 5/30/2012	API# (if applicable) 30-015-31412

Unit Letter	Section	Township	Range	County
G	6	24S	30E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 25 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A pipe fitting on the discharge line from the SWD pump broke. The fitting was replaced the same day. An area covering approximately 1,960 sq. ft of pasture land was affected west of the tank battery.

State of New Mexico
 Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-1205
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, by Tony Savoie to NMOCD Emergency Response #104 and Jim Amos (BLM) on 6/1/2012 at 11:41 a.m.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kyle Littrell </u> Title: <u> SH&E Supervisor </u> Signature: _____ Date: <u> 3/20/2020 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-1205
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-1205
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	
District RP	2RP-1205
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nJMW 1228428008

OPERATOR		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company: BOPCO, L.P. <i>260737</i>		Contact: Tony Savoie	
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220		Telephone No. 575-887-7329	
Facility Name: Delaware "C" Tank Battery, same well pad as the PLU-153		Facility Type: Exploration and Production	
Surface Owner: Federal		Mineral Owner: Federal	
		API No. 30-015-31412	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	6	24S	30 E					Eddy

Latitude N 32.248735 Longitude W 103.918797

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 200 bbls produced water	Volume Recovered: 5 bbls
Source of Release: Truck load line	Date and Hour of Occurrence: 9/2/12 time unknown	Date and Hour of Discovery: 9/2/12 8:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Artesia NMOCD emergency #104	
By Whom? Tony Savoie	Date and Hour: 9/2/12 at 12:19 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		

RECEIVED
SEP 06 2012
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*
The truck load line valve was left open allowing the produced water to spill out onto the tank battery pad. The valve was closed upon discovery.

Describe Area Affected and Cleanup Action Taken.*
Approximately 11,770 sq.ft. of caliche pad and lease road and approximately 7060 sq.ft. of pasture was affected by the release, all of the fluid that was released into the pasture soaked in, the free standing fluid was removed with a backhoe and the saturated soil on the caliche pad was scraped up and stockpiled on-site. The spill will be remediated in accordance to the NMOCD recommended guidelines for spills.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Tony Savoie</i>		OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie		Approved by Environmental Specialist: Signed By <i>Mike Brannon</i>	
Title: Waste Management and Remediation Specialist		Approval Date: OCT 10 2012	Expiration Date:
E-mail Address: tasavoie@basspet.com		Conditions of Approval:	
Date: 9/5/12 Phone: 432-556-8730		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: November 10, 2012**

2RP-1304

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	
District RP	2RP-1304
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-1304
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248735 Longitude -103.918797
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Delaware "C" Tank Battery	Site Type Exploration and Production
Date Release Discovered 9/2/2012	API# (if applicable) 30-015-31412

Unit Letter	Section	Township	Range	County
G	6	24S	30E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 200 bbls	Volume Recovered (bbls) 5 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The truck load line valve was left open allowing the produced water to spill out onto the tank battery pad. The valve was closed upon discovery. Approximately 11,770 square feet of caliche pad and lease road, and approximately 7,060 square feet of pasture land was affected by the release. Free standing fluid was removed with a backhoe and the saturated soil on the caliche pad was scraped up and stockpiled on-site.

State of New Mexico
 Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-1304
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, by Tony Savoie to Emergency Response #104 on 9/2/2012 at 12:19 p.m.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kyle Littrell </u> Title: <u> SH&E Supervisor </u> Signature: _____ Date: <u> 3/20/2020 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-1304
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-1304
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	
District RP	2RP-1304
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District 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

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

JM/W 1228429248

OPERATOR <input checked="" type="checkbox"/> Initial Report <input type="checkbox"/> Final Report	
Name of Company: BOPCO, L.P. <i>260737</i>	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: Delaware "C" Tank Battery, same well pad as the PLU-153	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-31412	

LOCATION OF RELEASE

Unit Letter G	Section 6	Township 24S	Range 30 E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude N 32.248735 Longitude W 103.918797

NATURE OF RELEASE

Type of Release: Crude oil and produced water	Volume of Release: 10 bbls crude oil and 20 bbls produced water	Volume Recovered: None
Source of Release: Produced water tank	Date and Hour of Occurrence: 8/18/12 at 4:00 p.m.	Date and Hour of Discovery: 8/18/12 4:00 p.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Late notification in person to Randy Dade	
By Whom?	Date and Hour: 8/20/12 8:30 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

RECEIVED
SEP 06 2012
NMOCD ARTESIA

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The water transfer pumps failed causing the water tanks to over-flow, an equalizer line was opened within 20 minutes after the tanks started to spill over. This action stopped the spill until the pumps could be repaired.

Describe Area Affected and Cleanup Action Taken.*
The 0 perm containment was being repaired at the time of the spill, the spill affected an area of approximately 900 sq. ft inside the containment area, and approximately 2000 sq. ft pasture area west of the tank battery. All of the impacted soil that could be removed around the tanks was hand excavated and placed on the pad area near the tank battery, approximately 40 cubic yards of soil was removed, the area was sampled and backfilled to allow for the containment to be re-built, and the liner installed. The area outside the containment will be remediated at a later date following the NMOCD guidelines for remediation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION	
Signature: <i>Tony Savoie</i>	Approved by Environmental Specialist: Signed By <i>Mike Benavente</i>
Printed Name: Tony Savoie	Approval Date: OCT 10 2012 Expiration Date:
Title: Waste Management and Remediation Specialist	Conditions of Approval:
E-mail Address: <i>tasavoie@basspet.com</i>	Attached <input type="checkbox"/>
Date: 9/5/12 Phone: 432-556-8730	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:

2RP-1305
November 10, 2012

* Attach Additional Sheets If Necessary

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	
District RP	2RP-1305
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-1305
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248735 Longitude -103.918797
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Delaware "C" Tank Battery	Site Type Exploration and Production
Date Release Discovered 8/18/2012	API# (if applicable) 30-015-31412

Unit Letter	Section	Township	Range	County
G	6	24S	30E	Eddy

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

Nature and Volume of Release

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

<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 10 bbls	Volume Recovered (bbls) 0 bbls
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 20 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The water transfer pumps failed causing the water tanks to overflow, an equalizer line was opened within 20 minutes after the tanks started to spill over. The release affected approximately 900 square feet inside the containment area and approximately 2,000 square feet of pasture area west of the tank battery. All of the impacted soil that could be removed around the tanks was excavated. The area was sampled and backfilled to allow for the containment to be rebuilt, and the liner installed.

State of New Mexico
 Oil Conservation Division

Incident ID	
District RP	2RP-1305
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? No, late notification was given in person to Randy Dade on 8/20/2012 at 8:30 a.m.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kyle Littrell </u> Title: <u> SH&E Supervisor </u> Signature: _____ Date: <u> 3/20/2020 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-1305
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?	<u>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

Incident ID	
District RP	2RP-1305
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	
District RP	2RP-1305
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

RECEIVED
OCT 01 2012
Submit Copy to appropriate District Office in accordance with 19.15.29 NMAC.
NMOCD ARTESIA

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

nJM W/1231129593
OPERATOR Initial Report Final Report
 Name of Company: BOPCO, L.P. 260737 Contact: Tony Savoie
 Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220 Telephone No. 575-887-7329
 Facility Name: Delaware "C" Tank Battery, same well pad as the PLU-153 Facility Type: Exploration and Production
 Surface Owner: Federal Mineral Owner: Federal API No. 30-015-31412

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	6	24S	30 E					Eddy

Latitude N 32.248735 Longitude W 103.918797

NATURE OF RELEASE

Type of Release: Produced water Volume of Release: 650 bbls produced water Volume Recovered: 0 bbls
 Source of Release: 8" suction line to SWD H-pump Date and Hour of Occurrence: 8/19/12 time approximately 12:00 a.m. 9/19/12 Date and Hour of Discovery: 8/19/12 2:00 a.m. 9/19/12
 Was Immediate Notice Given? Yes No Not Required If YES, To Whom? Artesia NMOCD emergency #104 and Jim Amos with the BLM
 By Whom? Tony Savoie Date and Hour: 8/19/12 at 8:52 a.m.
 Was a Watercourse Reached? Yes No If YES, Volume Impacting the Watercourse.
 If a Watercourse was Impacted, Describe Fully.*
 Describe Cause of Problem and Remedial Action Taken.*
 A connection going from the charge pumps to the H-pump failed, the pumps were shut down upon discovery and the line was repaired the next morning.

Describe Area Affected and Cleanup Action Taken.*
 The area around the SWD battery, the road and pasture were impacted by the new release, the same areas involved had been impacted by recent releases at the same location. A rig is being scheduled to determine the vertical extent under the containment and all of the impacted areas. The spill will be remediated in accordance to the NMOCD recommended guidelines for spills.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

OIL CONSERVATION DIVISION
 Signature: Tony Savoie
 Printed Name: Tony Savoie Approved by Environmental Specialist Signed By Mike Benavides
 Title: Waste Management and Remediation Specialist Approval Date: **NOV 06 2012** Expiration Date:
 E-mail Address: tasavoie@basspet.com Conditions of Approval: Attached
 Date: 9/28/12 Phone: 432-556-8730

* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:**

December 6th 2012

2RP-1383

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	
District RP	2RP-1383
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-1383
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248735 Longitude -103.918797
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Delaware "C" Tank Battery	Site Type Exploration and Production
Date Release Discovered 9/19/2012	API# (if applicable) 30-015-31412

Unit Letter	Section	Township	Range	County
G	6	24S	30E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 650 bbls	Volume Recovered (bbls) 0 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A connection going from the charge pumps to the H-pump failed. The pumps were shut down upon discovery and the line was repaired. The area around the SWD battery, the road, and the pasture were impacted by the release.

State of New Mexico
Oil Conservation Division

Page 2

Incident ID	
District RP	2RP-1383
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, by Tony Savoie to NMOCE Emergency Response #104 and Jim Amos (BLM) on 9/19/2012 at 8:52 a.m..	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kyle Littrell </u> Title: <u> SH&E Supervisor </u> Signature: _____ Date: <u> 3/20/2020 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-1383
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?	<u>> 100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-1383
Facility ID	
Application ID	

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-1383
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nHMP1411828179

OPERATOR

Initial Report Final Report

Name of Company: BOPCO, L.P. *260737*
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220
Facility Name: Delaware "C" Tank Battery, same well pad as the PLU-153

Contact: Tony Savoie
Telephone No. 575-887-7329
Facility Type: Exploration and Production

Surface Owner: Federal Mineral Owner: Federal API No. 30-015-31412

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	6	24S	30 E	1830	North	1980	East	Eddy

Latitude N 32.248866 Longitude W 103.919096

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 200 bbls	Volume Recovered: 15 bbls
Source of Release: 3" SWD injection line	Date and Hour of Occurrence: 4/21/14 time unknown	Date and Hour of Discovery: 4/21/14 at 12:30 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD emergency #104 and the BLM	
By Whom? Tony Savoie	Date and Hour: 4/21/14 at 2:30 p.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
APR 24 2014
NMOCD ARTESIA

Describe Cause of Problem and Remedial Action Taken.*
A 3" high pressure fiberglass line coupling broke in the coupling threads. The connection was replaced.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 4000 sq.ft. of pad area at the SWD location, approximately 4200 sq.ft. of pasture area and approximately 1300 sq.ft. of lease road. The spill ponded and followed a spill path almost identical to a spill at the same pump location on 5/30/12 reference 2RP-1205. The SWD is scheduled to be dismantled and the oil production battery re-located this year. There are several open C-141's for this facility that will be addressed at the time the battery is re-located.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: <i>Tony Savoie</i>		OIL CONSERVATION DIVISION	
Printed Name: Tony Savoie		Approved by Environmental Specialist: <i>[Signature]</i>	
Title: Waste Management and Remediation Specialist		Approval Date: <i>4/28/14</i>	Expiration Date: <i>NA</i>
E-mail Address: <i>tasavoie@basspet.com</i>		Conditions of Approval:	
Date: 4/24/14	Phone: 432-556-8730	Remediation per OCD Rule & Guidelines, & like approval by BLM. SUBMIT REMEDIATION PROPOSAL NO LATER THAN:	

Attached

* Attach Additional Sheets If Necessary

5/28/14

2RP-2264

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	
District RP	2RP-2264
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: XTO Energy, Inc	OGRID: 5380
Contact Name: Kyle Littrell	Contact Telephone: (432)-221-7331
Contact email: Kyle_Littrell@xtoenergy.com	Incident #: 2RP-2264
Contact mailing address: 522 W. Mermod, Suite 704 Carlsbad, NM 88220	

Location of Release Source

Latitude 32.248866 Longitude -103.919096
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Delaware "C" Tank Battery	Site Type Exploration and Production
Date Release Discovered 4/21/2014	API# (if applicable) 30-015-31412

Unit Letter	Section	Township	Range	County
G	6	24S	30E	Eddy

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

Nature and Volume of Release

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

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls) 200 bbls	Volume Recovered (bbls) 15 bbls
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A 3" high pressure fiberglass line coupling broke in the coupling threads. The connection was replaced. The release impacted approximately 4000 square feet of pad area, approximately 4200 square feet of pasture area, and approximately 1300 square feet of lease road. The release ponded and followed a spill path identical to a spill at the same pump location reference 2RP-1205. The SWD is scheduled to be dismantled, all open releases will be addressed at that time.

Incident ID	
District RP	2RP-2264
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was greater than 25 bbls.
If YES, was immediate notice given to the OCD? Yes, by Tony Savoie to NMOCD Emergency Response #104 and BLM on 4/21/2014 at 2:30 p.m.	

Initial Response

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

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.
If all the actions described above have <u>not</u> been undertaken, explain why:
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Printed Name: <u> Kyle Littrell </u> Title: <u> SH&E Supervisor </u> Signature: _____ Date: <u> 3/20/2020 </u> email: <u> Kyle_Littrell@xtoenergy.com </u> Telephone: <u> 432-221-7331 </u>
<u>OCD Only</u> Received by: _____ Date: _____

Incident ID	
District RP	2RP-2264
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

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

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

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

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

State of New Mexico
Oil Conservation Division

Page 4

Incident ID	
District RP	2RP-2264
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Page 6

Incident ID	
District RP	2RP-2264
Facility ID	
Application ID	

Closure

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

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

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: _____ Date: 3/20/2020

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

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOGS



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

BH or PH Name:	Date:
BH08	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	1	0.7			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		Reddish brown clay with silt



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

BH or PH Name:	Date:
BH09	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	0.8	1.0			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		Reddish brown clay with silt



LT Environmental, Inc.
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 Carlsbad, New Mexico 88220
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BH or PH Name:	Date:
BH10	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	1.2	1.9			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		Reddish brown clay with silt



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

BH or PH Name:	Date:
BH11	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	1.0	1.4			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		Reddish brown clay with silt



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

BH or PH Name:	Date:
BH12	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
dry	1.6	1.8			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		Reddish brown clay with silt



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

BH or PH Name:	Date:
BH13	8/20/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Hole Diameter:	Method:
	Chloride, PID		

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						1		
	7.2	1.5			2'	2		light tan, sandy loam with caliche
	6.2	0.8			3'	3		Same as above
	8.2	0.5			4'	4		Same as above
						5		
						6		
	5.2	0.4			7'	7		medium tan, sandy loam with caliche
						8		
						9		
	3.0	0.3			10'	10		Same as above
						11		
	1	0.5			12'	12		Medium tan sandy loam



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

BH or PH Name:	Date:
BH14	8/21/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
						0		
						1		
	2.6	2.7			2'	2		med. Brown silty sand loam
	1.8	2.8			3'	3		same as above
						4		
						5		
						6		
						7		
						8		
						9		
						10		
						11		
						12		



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

BH or PH Name:	Date:
BH15	8/21/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
	2	0.5			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		reddish brown clay



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

BH or PH Name:	Date:
BH16	8/21/2018
Site Name:	PLU Delaware C SWD
RP or Incident Number:	2RP-1304, 2RP-1205, 2RP-1305, 2RP-1383
LTE Job Number:	2RP-2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening:	Logged By: JH	Method:
	Chloride, PID	Hole Diameter:	Total Depth:

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithology/Remarks
	1.0	0.4			2'	0 1 2 3 4 5 6 7 8 9 10 11 12		silt loam, sandy in parts



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

Identifier: PH 17
 Date: 10-24-19
 Project Name: PLU Delaware C
 RP Number: REP-1205, 1304, 1305, 1303, 2064

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: PID Chloride
 Logged By: SL Method: Trackhoe
 Hole Diameter: _____ Total Depth: 2'

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
100	D 616	0.0	N	PH17	1	1	SP-SM	1-2 Sandy Brown, no odor, no stain, m-f, poorly graded trace silt
1010	D 493	0.0	N	PH17A	2	2		
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: PH108	Date: 10.24.19
Project Name: PLU Delaware C	RP Number: ZRP 1205, 1304, 1305, 1383, 2264
Logged By: SL	Method: Trackhoe
Hole Diameter:	Total Depth: 21

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: PH Chloride

Comments:

0.25

0.30

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	554	0.0	N	PH108	1	1	SP-SM	1-2 sand, brown, no odor, no stain, m-f, poorly graded trace silt
D	554	0.0	N	PH108A	2	2		
					3			TD @ 21'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: **PH19** Date: **10.24.19**
 Project Name: **PLU Delaware C** RP Number: **2 RP: 1205, 1304, 1305, 138, 2264**

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: **PID** **Chloride** Logged By: **SL** Method: **Trackhoe**
 Hole Diameter: _____ Total Depth: **2'**

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1035	D 557	0.0	N	PH19	1	1	sp-sm	1-2 Sand, Brown no odor, med, poorly graded, trace silt
1040	D 750	0.0	N	PH19A	2	2		
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: PH20
 Date: 10.24.19
 Project Name: PLU Delaware C
 RP Number: ZRP
 1205, 1304, 1305, 1303, 2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: PID Chloride
 Logged By: SL Method: Track hoe
 Hole Diameter: _____ Total Depth: 2'

Comments:

1030
1055

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	554	0.0	N	PH20	1	1	SP-SM	1-2 Sand, Brown, no odor, no stains, m-f, poorly graded Trace silt
D	342	0.0	N	PH20A	2	2		
					3			Top of 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: PH 21	Date: 10-24-19
Project Name: PW Delaware C	RP Number: 2RP 1205, 1304, 1305, 1383, 2264
Logged By: SL	Method: Truckhoe
Hole Diameter:	Total Depth: 2'

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: PH Chloride

Comments:

PH 0
PH 5

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	179	0.0	N	PH 21	1	1	SP-sm	102 Sand, Brown, no odor, no stain, m-f, poorly graded, trace silt
D	1075	0.0	N	PH 21A	2	2		
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: PH22	Date: 10.24.19
Project Name: PW Delaware C	RP Number: 200 1205, 1304, 1305, 1303, 2204

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: PID Chloride	Logged By: SL	Method: Trackhoe
Comments:		Hole Diameter:	Total Depth: 2'

A-15
1335

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
D	342	0.0	N	PH22	1	1	SP-SM	1-2 Sand, Brown, no odor, no stain m-f, poorly graded, trace silt
D	150	0.0	N	PH22A	2	2		
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			



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

Identifier: PH23	Date: 10.24.19
Project Name: PLU Delaware C	RP Number: 2RP 1205, 1304, 1305, 1307, 2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long:	Field Screening: PID Chloride	Logged By: SL	Method: Track hoe
Comments:	Hole Diameter:	Total Depth: 2'	

1245
1250

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
	991	0.0	N	PH23	0			
	991	0.0	N	PH23A	1	1	SP-SM	1-2 sand, brown, no odor, no stain, m-f, poorly graded. trace silt
					2	2		
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

TD @ 2'



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

Identifier: PH24
 Date: 10.24.19
 Project Name: PV Delaware C
 RP Number: WAP
 1205, 1304, 1305, 1383, 2264

LITHOLOGIC / SOIL SAMPLING LOG

Lat/Long: _____ Field Screening: PID Chloride
 Logged By: SL Method: Truck hoe
 Hole Diameter: _____ Total Depth: 2'

Comments:

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Depth	Soil/Rock Type	Lithology/Remarks
					0			
1310 D	431	0.0	N	PH24	1	1	JSsm	1-2 Sand, Brown, no odor, no staining, m-f poorly graded trace silt
1320 D	252	0.0	N	PH24	2	2		
					3			TD @ 2'
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			

ATTACHMENT 3: PHOTOGRAPHIC LOGS



PHOTOGRAPHIC LOG



Photograph 1: View of lease road leading to pad – looking east.



Photograph 2: View of pad and SWD tank battery – looking west



Photograph 3: View of well vegetated western pasture area.



Photograph 4: View of pad and SWD tank battery – looking south.

PLU DELAWARE C SWD BATTERY/DELAWARE C TANK BATTERY
32.248850, -103.919067

ATTACHMENT 4: LABORATORY ANALYTICAL REPORTS



Analytical Report 575577

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

18-DEC-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



18-DEC-18

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

Reference: XENCO Report No(s): **575577**
Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 575577. 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. 575577 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
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 575577

LT Environmental, Inc., Arvada, CO

Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	02-06-18 15:56		575577-001
SS2	S	02-06-18 15:57		575577-002
SS3	S	02-06-18 15:59	6"	575577-003
SS4	S	02-06-18 16:01	6"	575577-004
SS5	S	02-06-18 16:02	6"	575577-005
SS6	S	02-06-18 16:04		575577-006
SS7	S	02-06-18 15:35	6"	575577-007



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Project ID:
Work Order Number(s): 575577

Report Date: 18-DEC-18
Date Received: 02/07/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3040647 BTEX by EPA 8021B

Lab Sample ID 575577-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 575577-001, -002, -003, -004, -005, -007.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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

Batch: LBA-3040738 BTEX by EPA 8021B

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

Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 575577-006.



Certificate of Analysis Summary 575577

LT Environmental, Inc., Arvada, CO

Project Name: Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Feb-07-18 08:00 am
Report Date: 18-DEC-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	575577-001	575577-002	575577-003	575577-004	575577-005	575577-006
	Field Id:	SS1	SS2	SS3	SS4	SS5	SS6
	Depth:			6"-	6"-	6"-	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Feb-06-18 15:56	Feb-06-18 15:57	Feb-06-18 15:59	Feb-06-18 16:01	Feb-06-18 16:02	Feb-06-18 16:04
BTEX by EPA 8021B	Extracted:	Feb-07-18 14:10	Feb-08-18 08:45				
	Analyzed:	Feb-08-18 07:22	Feb-08-18 07:42	Feb-08-18 08:01	Feb-08-18 08:20	Feb-08-18 08:39	Feb-12-18 12:11
	Units/RL:	mg/kg RL					
Benzene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
Toluene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
Ethylbenzene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
m,p-Xylenes		<0.00396 0.00396	<0.00404 0.00404	<0.00403 0.00403	<0.00402 0.00402	<0.00396 0.00396	<0.00709 0.00709
o-Xylene		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
Total Xylenes		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
Total BTEX		<0.00198 0.00198	<0.00202 0.00202	<0.00202 0.00202	<0.00201 0.00201	<0.00198 0.00198	<0.00355 0.00355
Inorganic Anions by EPA 300	Extracted:	Feb-13-18 15:00					
	Analyzed:	Feb-13-18 19:46	Feb-13-18 19:53	Feb-13-18 20:14	Feb-13-18 20:21	Feb-13-18 20:28	Feb-13-18 20:35
	Units/RL:	mg/kg RL					
Chloride		2140 24.9	6270 49.8	23.2 4.93	<4.99 4.99	<4.99 4.99	<4.98 4.98
TPH by SW8015 Mod	Extracted:	Feb-07-18 09:00					
	Analyzed:	Feb-07-18 16:00	Feb-07-18 16:40	Feb-07-18 16:59	Feb-07-18 17:19	Feb-07-18 17:39	Feb-07-18 17:59
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		58.1 15.0	25.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		37.3 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		95.4 15.0	25.2 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 575577

LT Environmental, Inc., Arvada, CO

Project Name: Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Wed Feb-07-18 08:00 am
Report Date: 18-DEC-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	575577-007				
	Field Id:	SS7				
	Depth:	6"-				
	Matrix:	SOIL				
	Sampled:	Feb-06-18 15:35				
BTEX by EPA 8021B	Extracted:	Feb-07-18 14:10				
	Analyzed:	Feb-08-18 09:17				
	Units/RL:	mg/kg RL				
	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00401 0.00401				
	o-Xylene	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Inorganic Anions by EPA 300	Extracted:	Feb-13-18 15:00				
	Analyzed:	Feb-13-18 20:42				
Chloride	Units/RL:	mg/kg RL				
		2260 24.9				
TPH by SW8015 Mod	Extracted:	Feb-07-18 09:00				
	Analyzed:	Feb-07-18 18:19				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<14.9 14.9				
	Diesel Range Organics (DRO)	1840 14.9				
Motor Oil Range Hydrocarbons (MRO)	410 14.9					
Total TPH	2250 14.9					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS1** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-001 Date Collected: 02.06.18 15.56

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2140	24.9	mg/kg	02.13.18 19.46		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 16.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	58.1	15.0	mg/kg	02.07.18 16.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	37.3	15.0	mg/kg	02.07.18 16.00		1
Total TPH	PHC635	95.4	15.0	mg/kg	02.07.18 16.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	02.07.18 16.00	
o-Terphenyl	84-15-1	100	%	70-135	02.07.18 16.00	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS1** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-001 Date Collected: 02.06.18 15.56
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 02.07.18 14.10 Basis: Wet Weight
 Seq Number: 3040647

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.08.18 07.22	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.08.18 07.22	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85		%	80-120	02.08.18 07.22	
4-Bromofluorobenzene	460-00-4	92		%	80-120	02.08.18 07.22	



Certificate of Analytical Results 575577

LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS2** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-002 Date Collected: 02.06.18 15.57

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6270	49.8	mg/kg	02.13.18 19.53		10

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 16.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	25.2	15.0	mg/kg	02.07.18 16.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.07.18 16.40	U	1
Total TPH	PHC635	25.2	15.0	mg/kg	02.07.18 16.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.07.18 16.40	
o-Terphenyl	84-15-1	90	%	70-135	02.07.18 16.40	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS2** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-002 Date Collected: 02.06.18 15.57
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 02.07.18 14.10 Basis: Wet Weight
 Seq Number: 3040647

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	02.08.18 07.42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.08.18 07.42	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97		%	80-120	02.08.18 07.42	
1,4-Difluorobenzene	540-36-3	85		%	80-120	02.08.18 07.42	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS3** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-003 Date Collected: 02.06.18 15.59 Sample Depth: 6"
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.2	4.93	mg/kg	02.13.18 20.14		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 16.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.07.18 16.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.07.18 16.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.07.18 16.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.07.18 16.59	
o-Terphenyl	84-15-1	96	%	70-135	02.07.18 16.59	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: SS3	Matrix: Soil	Date Received: 02.07.18 08.00
Lab Sample Id: 575577-003	Date Collected: 02.06.18 15.59	Sample Depth: 6"
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 02.07.18 14.10	Basis: Wet Weight
Seq Number: 3040647		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	02.08.18 08.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	02.08.18 08.01	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	84	%	80-120	02.08.18 08.01		
4-Bromofluorobenzene	460-00-4	98	%	80-120	02.08.18 08.01		



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS4** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-004 Date Collected: 02.06.18 16.01 Sample Depth: 6"
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.13.18 20.21	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.07.18 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.07.18 17.19	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.07.18 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	02.07.18 17.19	
o-Terphenyl	84-15-1	92	%	70-135	02.07.18 17.19	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: SS4	Matrix: Soil	Date Received: 02.07.18 08.00
Lab Sample Id: 575577-004	Date Collected: 02.06.18 16.01	Sample Depth: 6"
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 02.07.18 14.10	Basis: Wet Weight
Seq Number: 3040647		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	02.08.18 08.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	02.08.18 08.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	80-120	02.08.18 08.20		
1,4-Difluorobenzene	540-36-3	89	%	80-120	02.08.18 08.20		



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS5** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-005 Date Collected: 02.06.18 16.02 Sample Depth: 6"
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.13.18 20.28	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 17.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.07.18 17.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.07.18 17.39	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.07.18 17.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	02.07.18 17.39	
o-Terphenyl	84-15-1	90	%	70-135	02.07.18 17.39	



Certificate of Analytical Results 575577

LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: SS5	Matrix: Soil	Date Received: 02.07.18 08.00
Lab Sample Id: 575577-005	Date Collected: 02.06.18 16.02	Sample Depth: 6"
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 02.07.18 14.10	Basis: Wet Weight
Seq Number: 3040647		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	02.08.18 08.39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	02.08.18 08.39	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97		%	80-120	02.08.18 08.39	
1,4-Difluorobenzene	540-36-3	86		%	80-120	02.08.18 08.39	



Certificate of Analytical Results 575577

LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS6** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-006 Date Collected: 02.06.18 16.04

Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	02.13.18 20.35	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	02.07.18 17.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	02.07.18 17.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	02.07.18 17.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	02.07.18 17.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	02.07.18 17.59	
o-Terphenyl	84-15-1	90	%	70-135	02.07.18 17.59	



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS6** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-006 Date Collected: 02.06.18 16.04
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 02.08.18 08.45 Basis: Wet Weight
 Seq Number: 3040738

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
Toluene	108-88-3	<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
Ethylbenzene	100-41-4	<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
m,p-Xylenes	179601-23-1	<0.00709	0.00709	mg/kg	02.12.18 12.11	U	1
o-Xylene	95-47-6	<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
Total Xylenes	1330-20-7	<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
Total BTEX		<0.00355	0.00355	mg/kg	02.12.18 12.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	78	%	80-120	02.12.18 12.11	**	
1,4-Difluorobenzene	540-36-3	81	%	80-120	02.12.18 12.11		



Certificate of Analytical Results 575577



LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: **SS7** Matrix: Soil Date Received: 02.07.18 08.00
 Lab Sample Id: 575577-007 Date Collected: 02.06.18 15.35 Sample Depth: 6"
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: JUM % Moisture:
 Analyst: JUM Date Prep: 02.13.18 15.00 Basis: Wet Weight
 Seq Number: 3040997

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2260	24.9	mg/kg	02.13.18 20.42		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 02.07.18 09.00 Basis: Wet Weight
 Seq Number: 3040461

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	02.07.18 18.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	1840	14.9	mg/kg	02.07.18 18.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	410	14.9	mg/kg	02.07.18 18.19		1
Total TPH	PHC635	2250	14.9	mg/kg	02.07.18 18.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	02.07.18 18.19	
o-Terphenyl	84-15-1	117	%	70-135	02.07.18 18.19	



Certificate of Analytical Results 575577

LT Environmental, Inc., Arvada, CO
 Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Sample Id: SS7	Matrix: Soil	Date Received: 02.07.18 08.00
Lab Sample Id: 575577-007	Date Collected: 02.06.18 15.35	Sample Depth: 6"
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 02.07.18 14.10	Basis: Wet Weight
Seq Number: 3040647		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	02.08.18 09.17	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
Total BTEX		<0.00200	0.00200	mg/kg	02.08.18 09.17	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	85		%	80-120	02.08.18 09.17	
4-Bromofluorobenzene	460-00-4	94		%	80-120	02.08.18 09.17	



LT Environmental, Inc.

Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3040997 Matrix: Solid Prep Method: E300P
 MB Sample Id: 7639086-1-BLK LCS Sample Id: 7639086-1-BKS Date Prep: 02.13.18
 LCSD Sample Id: 7639086-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	271	108	90-110	1	20	mg/kg	02.13.18 18:57	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3040997 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 575576-004 MS Sample Id: 575576-004 S Date Prep: 02.13.18
 MSD Sample Id: 575576-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.6	250	296	109	310	115	90-110	5	20	mg/kg	02.13.18 19:18	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3040997 Matrix: Soil Prep Method: E300P
 Parent Sample Id: 575578-001 MS Sample Id: 575578-001 S Date Prep: 02.13.18
 MSD Sample Id: 575578-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	701	249	940	96	960	104	90-110	2	20	mg/kg	02.13.18 20:56	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3040461 Matrix: Solid Prep Method: TX1005P
 MB Sample Id: 7638719-1-BLK LCS Sample Id: 7638719-1-BKS Date Prep: 02.07.18
 LCSD Sample Id: 7638719-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	972	97	1090	109	70-135	11	35	mg/kg	02.07.18 09:31	
Diesel Range Organics (DRO)	<8.13	1000	1100	110	1150	115	70-135	4	35	mg/kg	02.07.18 09:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		109		129		70-135	%	02.07.18 09:31
o-Terphenyl	111		107		114		70-135	%	02.07.18 09:31

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



LT Environmental, Inc.

Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Analytical Method: TPH by SW8015 Mod

Seq Number: 3040461
Parent Sample Id: 575430-001

Matrix: Soil
MS Sample Id: 575430-001 S

Prep Method: TX1005P
Date Prep: 02.07.18
MSD Sample Id: 575430-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	974	98	1090	109	70-135	11	35	mg/kg	02.07.18 10:34	
Diesel Range Organics (DRO)	14.4	998	1000	99	1120	111	70-135	11	35	mg/kg	02.07.18 10:34	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		118		70-135	%	02.07.18 10:34
o-Terphenyl	112		100		70-135	%	02.07.18 10:34

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040647
MB Sample Id: 7638867-1-BLK

Matrix: Solid
LCS Sample Id: 7638867-1-BKS

Prep Method: SW5030B
Date Prep: 02.07.18
LCSD Sample Id: 7638867-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0789	78	0.0706	71	70-130	11	35	mg/kg	02.07.18 23:07	
Toluene	<0.00202	0.101	0.0831	82	0.0737	74	70-130	12	35	mg/kg	02.07.18 23:07	
Ethylbenzene	<0.00202	0.101	0.0937	93	0.0851	85	71-129	10	35	mg/kg	02.07.18 23:07	
m,p-Xylenes	<0.00403	0.202	0.184	91	0.168	84	70-135	9	35	mg/kg	02.07.18 23:07	
o-Xylene	<0.00202	0.101	0.0921	91	0.0858	86	71-133	7	35	mg/kg	02.07.18 23:07	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		90		90		80-120	%	02.07.18 23:07
4-Bromofluorobenzene	102		102		112		80-120	%	02.07.18 23:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040738
MB Sample Id: 7638875-1-BLK

Matrix: Solid
LCS Sample Id: 7638875-1-BKS

Prep Method: SW5030B
Date Prep: 02.08.18
LCSD Sample Id: 7638875-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0821	83	0.0760	76	70-130	8	35	mg/kg	02.12.18 12:11	
Toluene	<0.00199	0.0994	0.0844	85	0.0813	81	70-130	4	35	mg/kg	02.12.18 12:11	
Ethylbenzene	<0.00199	0.0994	0.0895	90	0.0861	86	71-129	4	35	mg/kg	02.12.18 12:11	
m,p-Xylenes	<0.00398	0.199	0.174	87	0.167	84	70-135	4	35	mg/kg	02.12.18 12:11	
o-Xylene	<0.00199	0.0994	0.0884	89	0.0855	86	71-133	3	35	mg/kg	02.12.18 12:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		95		93		80-120	%	02.12.18 12:11
4-Bromofluorobenzene	98		102		99		80-120	%	02.12.18 12:11

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

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

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

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



LT Environmental, Inc.

Delaware C SWD 2RP-1305, 1304, 1383, 1205, 2264

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040647

Parent Sample Id: 575577-001

Matrix: Soil

MS Sample Id: 575577-001 S

Prep Method: SW5030B

Date Prep: 02.07.18

MSD Sample Id: 575577-001 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	0.0703	70	0.0632	63	70-130	11	35	mg/kg	02.07.18 23:45	X
Toluene	<0.00200	0.0998	0.0700	70	0.0624	62	70-130	11	35	mg/kg	02.07.18 23:45	X
Ethylbenzene	<0.00200	0.0998	0.0719	72	0.0618	62	71-129	15	35	mg/kg	02.07.18 23:45	X
m,p-Xylenes	<0.00399	0.200	0.139	70	0.119	59	70-135	16	35	mg/kg	02.07.18 23:45	X
o-Xylene	<0.00200	0.0998	0.0724	73	0.0629	63	71-133	14	35	mg/kg	02.07.18 23:45	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		87		80-120	%	02.07.18 23:45
4-Bromofluorobenzene	106		99		80-120	%	02.07.18 23:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3040738

Parent Sample Id: 575578-002

Matrix: Soil

MS Sample Id: 575578-002 S

Prep Method: SW5030B

Date Prep: 02.08.18

MSD Sample Id: 575578-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.125	125	70-130	19	35	mg/kg	02.12.18 12:11	
Toluene	<0.00202	0.101	0.0648	64	0.0677	68	70-130	4	35	mg/kg	02.12.18 12:11	X
Ethylbenzene	<0.00202	0.101	0.0603	60	0.0673	67	71-129	11	35	mg/kg	02.12.18 12:11	X
m,p-Xylenes	<0.00404	0.202	0.117	58	0.131	65	70-135	11	35	mg/kg	02.12.18 12:11	X
o-Xylene	<0.00202	0.101	0.0605	60	0.0674	67	71-133	11	35	mg/kg	02.12.18 12:11	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		80-120	%	02.12.18 12:11
4-Bromofluorobenzene	106		100		80-120	%	02.12.18 12:11

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

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

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

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



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Service Center - Amarillo, TX (806) 678-4514
 Service Center - Hobbs, NM (575) 392-7550

CHAIN OF CUSTODY

Page 1 of 1

Revision 2016.1

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes	
Company Name / Branch:	Project Name/Number:	Project Name/Number:	Project Location:	Matrix Code	Matrix Code	Matrix Code	Matrix Code
Company Address: 3320 North A St Bldg 1 #103	Project Name/Number: 20P-1305-1304	Project Name/Number: Delaware C SWD	Project Location: Carlisbad, NM	Matrix Code: BTEX 8021	Matrix Code: TPH Method 8015	Matrix Code: DR0 G20	Matrix Code: DR0 M20
Email: abler@henvu.com	Invoice To: Carlsbad, NM	Project Location: Carlisbad, NM	Project Location: Carlisbad, NM	Matrix Code: chlordane 300.1			
Project Contact: Herman Baker	Phone No: 432-894-5441	Project Location: Carlisbad, NM	Project Location: Carlisbad, NM				
Samplers Name: Alvin Baker	PO Number: 30-015-31412	Project Location: Carlisbad, NM	Project Location: Carlisbad, NM				
No.	Field ID / Point of Collection	Collection	Data Deliverable Information	Number of preserved bottles	Notes	Field Comments	Matrix Codes
1	SS1	Surface	Level II Std QC	1			
2	SS2	Surface	Level III Std QC+ Forms	1			
3	SS3	6"	Level IV (Full Data Plg /raw data)	1			
4	SS4	6"	Level II Report with TRRP checklist	1			
5	SS5	6"		1			
6	SS6	Surface		1			
7	SS7	6"		1			
8							
9							
10							

Temp: 4
 CF: (0-6: -0.2°C)
 (6-23: +0.2°C)
 Corrected Temp: 3.8

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 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Analytical Report 596449

for
LT Environmental, Inc.

Project Manager: Adrian Baker
PLU Delaware C SWD

27-AUG-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



27-AUG-18

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

Reference: XENCO Report No(s): **596449**
PLU Deleware C SWD
Project Address: NM. Eddy 2RP-1305,1383 1304

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596449. 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. 596449 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
Project Assistant

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Sample Cross Reference 596449

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	08-17-18 10:15	14 ft	596449-001
BH02	S	08-17-18 11:30	5.5 ft	596449-002
BH03	S	08-17-18 11:45	4 ft	596449-003
BH04	S	08-17-18 12:15	9.5 ft	596449-004
BH05	S	08-17-18 13:50	6 ft	596449-005
BH06	S	08-17-18 15:00	9 ft	596449-006
BH07	S	08-17-18 16:10	12 ft	596449-007



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Deleware C SWD

Project ID:
Work Order Number(s): 596449

Report Date: 27-AUG-18
Date Received: 08/21/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061313 BTEX by EPA 8021B

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



Certificate of Analysis Summary 596449

LT Environmental, Inc., Arvada, CO

Project Name: PLU Deleware C SWD

Project Id:
Contact: Adrian Baker
Project Location: NM. Eddy 2RP-1305,1383 1304

Date Received in Lab: Tue Aug-21-18 10:35 am
Report Date: 27-AUG-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	596449-001	596449-002	596449-003	596449-004	596449-005	596449-006
	Field Id:	BH01	BH02	BH03	BH04	BH05	BH06
	Depth:	14- ft	5.5- ft	4- ft	9.5- ft	6- ft	9- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Aug-17-18 10:15	Aug-17-18 11:30	Aug-17-18 11:45	Aug-17-18 12:15	Aug-17-18 13:50	Aug-17-18 15:00
BTEX by EPA 8021B	Extracted:	Aug-25-18 10:30					
	Analyzed:	Aug-26-18 10:04	Aug-26-18 10:25	Aug-26-18 10:46	Aug-26-18 11:07	Aug-26-18 12:10	Aug-26-18 12:31
	Units/RL:	mg/kg RL					
	Benzene	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
	Toluene	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
	Ethylbenzene	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
	m,p-Xylenes	<0.00398 0.00398	<0.00398 0.00398	<0.00401 0.00401	<0.00399 0.00399	<0.00402 0.00402	<0.00400 0.00400
	o-Xylene	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	
Total BTEX	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	
Inorganic Anions by EPA 300	Extracted:	Aug-21-18 17:30					
	Analyzed:	Aug-21-18 21:57	Aug-21-18 22:02	Aug-21-18 22:19	Aug-21-18 22:24	Aug-21-18 22:40	Aug-21-18 22:46
	Units/RL:	mg/kg RL					
Chloride	77.2 4.96	74.4 4.96	51.7 4.96	188 4.96	172 4.95	71.6 4.99	
TPH by SW8015 Mod	Extracted:	Aug-21-18 16:00					
	Analyzed:	Aug-21-18 23:13	Aug-21-18 23:33	Aug-21-18 23:52	Aug-22-18 00:52	Aug-22-18 01:11	Aug-22-18 01:31
	Units/RL:	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Oil Range Hydrocarbons (ORO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer

Jessica Kramer
 Project Assistant



Certificate of Analysis Summary 596449

LT Environmental, Inc., Arvada, CO

Project Name: PLU Deleware C SWD

Project Id:
Contact: Adrian Baker
Project Location: NM. Eddy 2RP-1305,1383 1304

Date Received in Lab: Tue Aug-21-18 10:35 am
Report Date: 27-AUG-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	596449-007				
	Field Id:	BH07				
	Depth:	12- ft				
	Matrix:	SOIL				
	Sampled:	Aug-17-18 16:10				
BTEX by EPA 8021B	Extracted:	Aug-25-18 10:30				
	Analyzed:	Aug-26-18 12:52				
	Units/RL:	mg/kg RL				
	Benzene	<0.00200 0.00200				
	Toluene	<0.00200 0.00200				
	Ethylbenzene	<0.00200 0.00200				
	m,p-Xylenes	<0.00401 0.00401				
	o-Xylene	<0.00200 0.00200				
Total Xylenes	<0.00200 0.00200					
Total BTEX	<0.00200 0.00200					
Inorganic Anions by EPA 300	Extracted:	Aug-21-18 17:30				
	Analyzed:	Aug-21-18 22:51				
	Units/RL:	mg/kg RL				
Chloride		2550 24.9				
TPH by SW8015 Mod	Extracted:	Aug-21-18 16:00				
	Analyzed:	Aug-22-18 01:50				
	Units/RL:	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<14.9 14.9				
	Diesel Range Organics (DRO)	<14.9 14.9				
Oil Range Hydrocarbons (ORO)	<14.9 14.9					
Total TPH	<14.9 14.9					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
 Project Assistant



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **BH01** Matrix: Soil Date Received: 08.21.18 10.35
 Lab Sample Id: 596449-001 Date Collected: 08.17.18 10.15 Sample Depth: 14 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.21.18 17.30 Basis: Wet Weight
 Seq Number: 3060822

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	77.2	4.96	mg/kg	08.21.18 21.57		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.21.18 16.00 Basis: Wet Weight
 Seq Number: 3060852

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 23.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 23.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 23.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.21.18 23.13	
o-Terphenyl	84-15-1	90	%	70-135	08.21.18 23.13	



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH01	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-001	Date Collected: 08.17.18 10.15	Sample Depth: 14 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.18 10.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.18 10.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.26.18 10.04		
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.26.18 10.04		



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH02	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-002	Date Collected: 08.17.18 11.30	Sample Depth: 5.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.26.18 10.25	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.26.18 10.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.26.18 10.25		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.26.18 10.25		



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH03	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-003	Date Collected: 08.17.18 11.45	Sample Depth: 4 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.21.18 17.30	Basis: Wet Weight
Seq Number: 3060822		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	51.7	4.96	mg/kg	08.21.18 22.19		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.21.18 16.00	Basis: Wet Weight
Seq Number: 3060852		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.21.18 23.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.21.18 23.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.21.18 23.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.21.18 23.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.21.18 23.52	
o-Terphenyl	84-15-1	86	%	70-135	08.21.18 23.52	



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **BH03** Matrix: Soil Date Received: 08.21.18 10.35
 Lab Sample Id: 596449-003 Date Collected: 08.17.18 11.45 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B
 Tech: ALJ % Moisture:
 Analyst: ALJ Date Prep: 08.25.18 10.30 Basis: Wet Weight
 Seq Number: 3061313

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.26.18 10.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.18 10.46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	110	%	70-130	08.26.18 10.46		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.26.18 10.46		



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH04	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-004	Date Collected: 08.17.18 12.15	Sample Depth: 9.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.21.18 17.30	Basis: Wet Weight
Seq Number: 3060822		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	188	4.96	mg/kg	08.21.18 22.24		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.21.18 16.00	Basis: Wet Weight
Seq Number: 3060852		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.22.18 00.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.22.18 00.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.22.18 00.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.22.18 00.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.22.18 00.52	
o-Terphenyl	84-15-1	86	%	70-135	08.22.18 00.52	



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH04	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-004	Date Collected: 08.17.18 12.15	Sample Depth: 9.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.26.18 11.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.18 11.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	08.26.18 11.07		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.26.18 11.07		



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH05	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-005	Date Collected: 08.17.18 13.50	Sample Depth: 6 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.21.18 17.30	Basis: Wet Weight
Seq Number: 3060822		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	172	4.95	mg/kg	08.21.18 22.40		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.21.18 16.00	Basis: Wet Weight
Seq Number: 3060852		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.22.18 01.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.22.18 01.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.22.18 01.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.22.18 01.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.22.18 01.11	
o-Terphenyl	84-15-1	87	%	70-135	08.22.18 01.11	



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH05	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-005	Date Collected: 08.17.18 13.50	Sample Depth: 6 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.26.18 12.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.26.18 12.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	08.26.18 12.10		
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.26.18 12.10		



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH06	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-006	Date Collected: 08.17.18 15.00	Sample Depth: 9 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.21.18 17.30	Basis: Wet Weight
Seq Number: 3060822		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	71.6	4.99	mg/kg	08.21.18 22.46		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.21.18 16.00	Basis: Wet Weight
Seq Number: 3060852		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.22.18 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.22.18 01.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.22.18 01.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.22.18 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.22.18 01.31	
o-Terphenyl	84-15-1	85	%	70-135	08.22.18 01.31	



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH06	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-006	Date Collected: 08.17.18 15.00	Sample Depth: 9 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.26.18 12.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.18 12.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.26.18 12.31		
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.26.18 12.31		



Certificate of Analytical Results 596449



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH07	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-007	Date Collected: 08.17.18 16.10	Sample Depth: 12 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.21.18 17.30	Basis: Wet Weight
Seq Number: 3060822		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2550	24.9	mg/kg	08.21.18 22.51		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.21.18 16.00	Basis: Wet Weight
Seq Number: 3060852		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.22.18 01.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.22.18 01.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.22.18 01.50	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.22.18 01.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.22.18 01.50	
o-Terphenyl	84-15-1	88	%	70-135	08.22.18 01.50	



Certificate of Analytical Results 596449

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH07	Matrix: Soil	Date Received: 08.21.18 10.35
Lab Sample Id: 596449-007	Date Collected: 08.17.18 16.10	Sample Depth: 12 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.26.18 12.52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.26.18 12.52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	08.26.18 12.52		
4-Bromofluorobenzene	460-00-4	75	%	70-130	08.26.18 12.52		



LT Environmental, Inc.
PLU Deleware C SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3060822

MB Sample Id: 7660857-1-BLK

Matrix: Solid

LCS Sample Id: 7660857-1-BKS

Prep Method: E300P

Date Prep: 08.21.18

LCSD Sample Id: 7660857-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	249	100	90-110	0	20	mg/kg	08.21.18 20:35	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3060822

Parent Sample Id: 596446-008

Matrix: Soil

MS Sample Id: 596446-008 S

Prep Method: E300P

Date Prep: 08.21.18

MSD Sample Id: 596446-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	351	250	584	93	586	94	90-110	0	20	mg/kg	08.21.18 20:51	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3060822

Parent Sample Id: 596449-002

Matrix: Soil

MS Sample Id: 596449-002 S

Prep Method: E300P

Date Prep: 08.21.18

MSD Sample Id: 596449-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	74.4	248	325	101	324	101	90-110	0	20	mg/kg	08.21.18 22:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3060852

MB Sample Id: 7660865-1-BLK

Matrix: Solid

LCS Sample Id: 7660865-1-BKS

Prep Method: TX1005P

Date Prep: 08.21.18

LCSD Sample Id: 7660865-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	984	98	1000	100	70-135	2	20	mg/kg	08.21.18 19:38	
Diesel Range Organics (DRO)	<15.0	1000	989	99	1000	100	70-135	1	20	mg/kg	08.21.18 19:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	94		119		121		70-135	%	08.21.18 19:38
o-Terphenyl	95		102		102		70-135	%	08.21.18 19:38

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

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

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

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



LT Environmental, Inc.
PLU Deleware C SWD

Analytical Method: TPH by SW8015 Mod
Seq Number: 3060852
Parent Sample Id: 596317-009

Matrix: Soil
MS Sample Id: 596317-009 S

Prep Method: TX1005P
Date Prep: 08.21.18
MSD Sample Id: 596317-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1000	100	995	100	70-135	1	20	mg/kg	08.22.18 06:58	
Diesel Range Organics (DRO)	<15.0	1000	1030	103	1010	101	70-135	2	20	mg/kg	08.22.18 06:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		125		70-135	%	08.22.18 06:58
o-Terphenyl	102		102		70-135	%	08.22.18 06:58

Analytical Method: BTEX by EPA 8021B
Seq Number: 3061313
MB Sample Id: 7661181-1-BLK

Matrix: Solid
LCS Sample Id: 7661181-1-BKS

Prep Method: SW5030B
Date Prep: 08.25.18
LCSD Sample Id: 7661181-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0935	94	0.101	100	70-130	8	35	mg/kg	08.26.18 02:22	
Toluene	<0.00200	0.100	0.0863	86	0.0948	94	70-130	9	35	mg/kg	08.26.18 02:22	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.104	103	70-130	6	35	mg/kg	08.26.18 02:22	
m,p-Xylenes	<0.00401	0.200	0.217	109	0.233	116	70-130	7	35	mg/kg	08.26.18 02:22	
o-Xylene	<0.00200	0.100	0.106	106	0.114	113	70-130	7	35	mg/kg	08.26.18 02:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		107		109		70-130	%	08.26.18 02:22
4-Bromofluorobenzene	112		106		115		70-130	%	08.26.18 02:22

Analytical Method: BTEX by EPA 8021B
Seq Number: 3061313
Parent Sample Id: 596319-008

Matrix: Soil
MS Sample Id: 596319-008 S

Prep Method: SW5030B
Date Prep: 08.25.18
MSD Sample Id: 596319-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0734	73	0.0633	63	70-130	15	35	mg/kg	08.26.18 03:04	X
Toluene	<0.00202	0.101	0.0649	64	0.0571	57	70-130	13	35	mg/kg	08.26.18 03:04	X
Ethylbenzene	<0.00202	0.101	0.0672	67	0.0608	61	70-130	10	35	mg/kg	08.26.18 03:04	X
m,p-Xylenes	<0.00403	0.202	0.148	73	0.131	66	70-130	12	35	mg/kg	08.26.18 03:04	X
o-Xylene	<0.00202	0.101	0.0689	68	0.0592	59	70-130	15	35	mg/kg	08.26.18 03:04	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		98		70-130	%	08.26.18 03:04
4-Bromofluorobenzene	101		124		70-130	%	08.26.18 03:04

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

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

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

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



Setting the Standard since 1990
 Stafford, Texas (281-240-4200)
 Dallas, Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 of 1

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

WWW.XENCO.COM

Phoenix, Arizona (480-355-0900)

Xenco Quote #

Xenco Job #

566000

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: LT Environmental, Inc. Permian Office		Project Name/Number: PLD Delaware C SWP		Xenco Quote #		Xenco Job #									
Company Address: 2302 N.H. St., Building Unit #103 Midland TX 79705		Project Location: NM - Eddy ZEP-1305, 1383, 1304		Xenco Job #		Matrix Codes									
Email: abaker@xenco.com 432-794-5178		Invoice To: XTO Energy Kyle Littrell		Xenco Job #		Matrix Codes									
Project Contact: African Baker		PO Number:		Xenco Job #		Matrix Codes									
Sampler's Name: Jada Lambert		Field ID / Point of Collection		Xenco Job #		Matrix Codes									
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes
1	BH01	4'	8/17/18	10:15	S	1									
2	BH02	5.5'		11:30	S	1									
3	BH03	4'		11:45	S	1									
4	BH04	9.5'		12:15	S	1									
5	BH05	6'		13:50	S	1									
6	BH06	9'		15:00	S	1									
7	BH07	12'		16:10	S	1									
8															
9															
10															

Matrix Codes
 W = Water
 S = Soil/Sed/Solid
 GW = Ground Water
 DW = Drinking Water
 P = Product
 SW = Surface water
 SL = Sludge
 OW = Ocean/Sea Water
 O = Oil
 WW = Waste Water
 A = Air

Field Comments

Turnaround Time (Business days) Same Day TAT 5 Day TAT Next Day EMERGENCY 7 Day TAT 2 Day EMERGENCY Contract TAT 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Relinquished by: **[Signature]** Date Time: **8/18/18 9:45** Received By: **[Signature]** Date Time: **8/20/18 15:30**

Relinquished by: **[Signature]** Date Time: **8/18/18 9:45** Received By: **[Signature]** Date Time: **8/20/18 15:30**

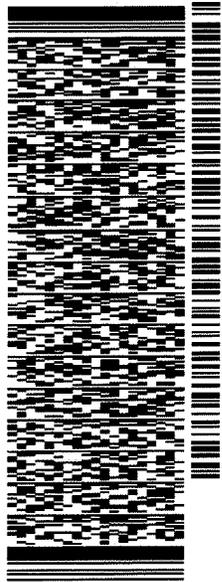
Relinquished by: **[Signature]** Date Time: **8/18/18 9:45** Received By: **[Signature]** Date Time: **8/20/18 15:30**

ORIGIN ID:MAFA (806) 794-1296
XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND, TX 79701
UNITED STATES US

SHIP DATE: 20AUG18
ACTWGT: 34.00 LB
CAD: 10183706/NET4040
DIMS: 19x16x12 IN
BILL RECIPIENT

TO XENCO
XENCO
1211 W. FLORIDA AVE

MIDLAND TX 79701
(806) 794-1296
INV:
PO:
REF:
DEPT:

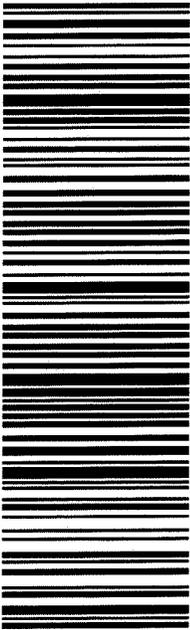


TRK# 7730 1897 6966
0201

TUE - 21 AUG 3:00P
STANDARD OVERNIGHT

41 MAFA

TX-US 79701
LBB



552J1/3309/DCA5

After printing this label:

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

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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/21/2018 10:35:00 AM

Work Order #: 596449

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

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

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08/21/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/22/2018
Jessica Kramer

Analytical Report 596788

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Delaware C SWD

10-SEP-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



10-SEP-18

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

Reference: XENCO Report No(s): **596788**
PLU Delaware C SWD
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596788. 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. 596788 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
Project Assistant

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Sample Cross Reference 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH14	S	08-21-18 09:20	3 ft	596788-001
BH15	S	08-21-18 09:45	2 ft	596788-002
BH16	S	08-21-18 11:30	2 ft	596788-003
SS12	S	08-21-18 11:10	6 In	596788-004
SS13	S	08-21-18 11:15	6 In	596788-005
SS14	S	08-21-18 11:20	6 In	596788-006
SS15	S	08-21-18 11:25	6 In	596788-007
SS16	S	08-21-18 11:30	6 In	596788-008



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Delaware C SWD

Project ID:
Work Order Number(s): 596788

Report Date: 10-SEP-18
Date Received: 08/23/2018

Sample receipt non conformances and comments:

PER CLIENT EMAIL, CORRECTED SAMPLE NAMES FOR SAMPLE 004,005,006,007,008 JKR
09/10/18 NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061313 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3061437 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3061634 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 596788

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C SWD

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Thu Aug-23-18 11:00 am
Report Date: 10-SEP-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	596788-001	596788-002	596788-003	596788-004	596788-005	596788-006
	<i>Field Id:</i>	BH14	BH15	BH16	SS12	SS13	SS14
	<i>Depth:</i>	3- ft	2- ft	2- ft	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-21-18 09:20	Aug-21-18 09:45	Aug-21-18 11:30	Aug-21-18 11:10	Aug-21-18 11:15	Aug-21-18 11:20
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-28-18 08:00	Aug-28-18 08:00	Aug-29-18 08:00	Aug-29-18 08:00	Aug-29-18 08:00	Aug-29-18 08:00
	<i>Analyzed:</i>	Aug-28-18 17:43	Aug-28-18 18:04	Aug-29-18 11:18	Aug-29-18 11:38	Aug-29-18 11:58	Aug-29-18 12:19
	<i>Units/RL:</i>	mg/kg RL					
	Benzene	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
	Ethylbenzene	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401
	o-Xylene	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Aug-23-18 16:45					
	<i>Analyzed:</i>	Aug-23-18 21:20	Aug-23-18 21:42	Aug-23-18 21:58	Aug-23-18 22:04	Aug-23-18 22:09	Aug-23-18 22:15
	<i>Units/RL:</i>	mg/kg RL					
Chloride	317 4.98	1080 4.97	453 4.96	1800 24.9	258 4.95	183 4.96	
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-24-18 07:00					
	<i>Analyzed:</i>	Aug-24-18 09:31	Aug-24-18 09:51	Aug-24-18 10:52	Aug-24-18 11:11	Aug-24-18 11:31	Aug-24-18 11:51
	<i>Units/RL:</i>	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0
	Diesel Range Organics (DRO)	60.7 15.0	<15.0 15.0	20.6 14.9	81.5 15.0	15.5 14.9	<15.0 15.0
	Oil Range Hydrocarbons (ORO)	<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	<14.9 14.9	<15.0 15.0
Total TPH	60.7 15.0	<15.0 15.0	20.6 14.9	81.5 15.0	15.5 14.9	<15.0 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 596788

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C SWD

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Thu Aug-23-18 11:00 am
Report Date: 10-SEP-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	596788-007	596788-008			
	<i>Field Id:</i>	SS15	SS16			
	<i>Depth:</i>	6- In	6- In			
	<i>Matrix:</i>	SOIL	SOIL			
	<i>Sampled:</i>	Aug-21-18 11:25	Aug-21-18 11:30			
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-25-18 10:30	Aug-29-18 08:00			
	<i>Analyzed:</i>	Aug-26-18 15:17	Aug-29-18 13:00			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
	Benzene	<0.00201 0.00201	<0.00201 0.00201			
	Toluene	<0.00201 0.00201	<0.00201 0.00201			
	Ethylbenzene	<0.00201 0.00201	<0.00201 0.00201			
	m,p-Xylenes	<0.00402 0.00402	<0.00402 0.00402			
	o-Xylene	<0.00201 0.00201	<0.00201 0.00201			
Total Xylenes	<0.00201 0.00201	<0.00201 0.00201				
Total BTEX	<0.00201 0.00201	<0.00201 0.00201				
Inorganic Anions by EPA 300	<i>Extracted:</i>	Aug-23-18 16:45	Aug-23-18 16:45			
	<i>Analyzed:</i>	Aug-23-18 22:20	Aug-23-18 22:26			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
Chloride		82.0 4.95	491 24.8			
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-24-18 07:00	Aug-24-18 07:00			
	<i>Analyzed:</i>	Aug-24-18 12:11	Aug-24-18 12:32			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL			
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0			
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0			
Oil Range Hydrocarbons (ORO)	<15.0 15.0	<15.0 15.0				
Total TPH	<15.0 15.0	<15.0 15.0				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Jessica Kramer
 Project Assistant



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH14	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-001	Date Collected: 08.21.18 09.20	Sample Depth: 3 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.23.18 16.45	Basis: Wet Weight
Seq Number: 3061062		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	317	4.98	mg/kg	08.23.18 21.20		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.24.18 07.00	Basis: Wet Weight
Seq Number: 3061228		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 09.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	60.7	15.0	mg/kg	08.24.18 09.31		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 09.31	U	1
Total TPH	PHC635	60.7	15.0	mg/kg	08.24.18 09.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.24.18 09.31	
o-Terphenyl	84-15-1	92	%	70-135	08.24.18 09.31	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH14	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-001	Date Collected: 08.21.18 09.20	Sample Depth: 3 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.28.18 08.00	Basis: Wet Weight
Seq Number: 3061437		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.18 17.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.18 17.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.28.18 17.43		
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.28.18 17.43		



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **BH15** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596788-002 Date Collected: 08.21.18 09.45 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.23.18 16.45 Basis: Wet Weight
 Seq Number: 3061062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1080	4.97	mg/kg	08.23.18 21.42		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 09.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 09.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 09.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 09.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	08.24.18 09.51	
o-Terphenyl	84-15-1	85	%	70-135	08.24.18 09.51	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH15	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-002	Date Collected: 08.21.18 09.45	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.28.18 08.00	Basis: Wet Weight
Seq Number: 3061437		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.18 18.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.18 18.04	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	87		%	70-130	08.28.18 18.04	
1,4-Difluorobenzene	540-36-3	94		%	70-130	08.28.18 18.04	



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH16	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-003	Date Collected: 08.21.18 11.30	Sample Depth: 2 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.23.18 16.45	Basis: Wet Weight
Seq Number: 3061062		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	453	4.96	mg/kg	08.23.18 21.58		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.24.18 07.00	Basis: Wet Weight
Seq Number: 3061228		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.24.18 10.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	20.6	14.9	mg/kg	08.24.18 10.52		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.24.18 10.52	U	1
Total TPH	PHC635	20.6	14.9	mg/kg	08.24.18 10.52		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.24.18 10.52	
o-Terphenyl	84-15-1	95	%	70-135	08.24.18 10.52	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH16	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-003	Date Collected: 08.21.18 11.30	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.18 11.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.18 11.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.29.18 11.18		
1,4-Difluorobenzene	540-36-3	119	%	70-130	08.29.18 11.18		



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS12	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-004	Date Collected: 08.21.18 11.10	Sample Depth: 6 In
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.23.18 16.45	Basis: Wet Weight
Seq Number: 3061062		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1800	24.9	mg/kg	08.23.18 22.04		5

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.24.18 07.00	Basis: Wet Weight
Seq Number: 3061228		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 11.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	81.5	15.0	mg/kg	08.24.18 11.11		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 11.11	U	1
Total TPH	PHC635	81.5	15.0	mg/kg	08.24.18 11.11		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.24.18 11.11	
o-Terphenyl	84-15-1	99	%	70-135	08.24.18 11.11	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: SS12	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-004	Date Collected: 08.21.18 11.10	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.18 11.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.18 11.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.29.18 11.38		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.29.18 11.38		



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **SS13** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596788-005 Date Collected: 08.21.18 11.15 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.23.18 16.45 Basis: Wet Weight
 Seq Number: 3061062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	258	4.95	mg/kg	08.23.18 22.09		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.24.18 11.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	15.5	14.9	mg/kg	08.24.18 11.31		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.24.18 11.31	U	1
Total TPH	PHC635	15.5	14.9	mg/kg	08.24.18 11.31		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	08.24.18 11.31	
o-Terphenyl	84-15-1	97	%	70-135	08.24.18 11.31	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS13	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-005	Date Collected: 08.21.18 11.15	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.18 11.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.18 11.58	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86		%	70-130	08.29.18 11.58	
1,4-Difluorobenzene	540-36-3	95		%	70-130	08.29.18 11.58	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **SS14** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596788-006 Date Collected: 08.21.18 11.20 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.23.18 16.45 Basis: Wet Weight
 Seq Number: 3061062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	4.96	mg/kg	08.23.18 22.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 11.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 11.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 11.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 11.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.24.18 11.51	
o-Terphenyl	84-15-1	100	%	70-135	08.24.18 11.51	



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS14	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-006	Date Collected: 08.21.18 11.20	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.29.18 12.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.18 12.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	08.29.18 12.19	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.29.18 12.19	



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **SS15** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596788-007 Date Collected: 08.21.18 11.25 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.23.18 16.45 Basis: Wet Weight
 Seq Number: 3061062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	82.0	4.95	mg/kg	08.23.18 22.20		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 12.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 12.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 12.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 12.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.24.18 12.11	
o-Terphenyl	84-15-1	95	%	70-135	08.24.18 12.11	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: SS15	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-007	Date Collected: 08.21.18 11.25	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.25.18 10.30	Basis: Wet Weight
Seq Number: 3061313		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.26.18 15.17	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.26.18 15.17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.26.18 15.17		
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.26.18 15.17		



Certificate of Analytical Results 596788



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **SS16** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596788-008 Date Collected: 08.21.18 11.30 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.23.18 16.45 Basis: Wet Weight
 Seq Number: 3061062

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	491	24.8	mg/kg	08.23.18 22.26		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 12.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 12.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 12.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 12.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.24.18 12.32	
o-Terphenyl	84-15-1	95	%	70-135	08.24.18 12.32	



Certificate of Analytical Results 596788

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS16	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596788-008	Date Collected: 08.21.18 11.30	Sample Depth: 6 In
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.18 13.00	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.18 13.00	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	115		%	70-130	08.29.18 13.00	
1,4-Difluorobenzene	540-36-3	106		%	70-130	08.29.18 13.00	



LT Environmental, Inc.

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Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061062
 MB Sample Id: 7661018-1-BLK

Matrix: Solid
 LCS Sample Id: 7661018-1-BKS

Prep Method: E300P
 Date Prep: 08.23.18
 LCSD Sample Id: 7661018-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	246	98	246	98	90-110	0	20	mg/kg	08.23.18 19:52	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061062
 Parent Sample Id: 596788-001

Matrix: Soil
 MS Sample Id: 596788-001 S

Prep Method: E300P
 Date Prep: 08.23.18
 MSD Sample Id: 596788-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	317	249	553	95	551	94	90-110	0	20	mg/kg	08.23.18 21:25	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061062
 Parent Sample Id: 596792-001

Matrix: Soil
 MS Sample Id: 596792-001 S

Prep Method: E300P
 Date Prep: 08.23.18
 MSD Sample Id: 596792-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.12	256	263	103	266	104	90-110	1	20	mg/kg	08.23.18 20:09	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3061228
 MB Sample Id: 7661126-1-BLK

Matrix: Solid
 LCS Sample Id: 7661126-1-BKS

Prep Method: TX1005P
 Date Prep: 08.24.18
 LCSD Sample Id: 7661126-1-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	923	92	909	91	70-135	2	20	mg/kg	08.24.18 08:51	
Diesel Range Organics (DRO)	<15.0	1000	958	96	944	94	70-135	1	20	mg/kg	08.24.18 08:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		114		109		70-135	%	08.24.18 08:51
o-Terphenyl	105		100		102		70-135	%	08.24.18 08:51

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

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

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

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



LT Environmental, Inc.
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Analytical Method: TPH by SW8015 Mod

Seq Number: 3061228

Parent Sample Id: 596788-002

Matrix: Soil

MS Sample Id: 596788-002 S

Prep Method: TX1005P

Date Prep: 08.24.18

MSD Sample Id: 596788-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1000	100	902	90	70-135	10	20	mg/kg	08.25.18 12:31	
Diesel Range Organics (DRO)	<15.0	997	1050	105	944	94	70-135	11	20	mg/kg	08.25.18 12:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		113		70-135	%	08.25.18 12:31
o-Terphenyl	112		99		70-135	%	08.25.18 12:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061313

MB Sample Id: 7661181-1-BLK

Matrix: Solid

LCS Sample Id: 7661181-1-BKS

Prep Method: SW5030B

Date Prep: 08.25.18

LCSD Sample Id: 7661181-1-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	0.0935	94	0.101	100	70-130	8	35	mg/kg	08.26.18 02:22	
Toluene	<0.00200	0.100	0.0863	86	0.0948	94	70-130	9	35	mg/kg	08.26.18 02:22	
Ethylbenzene	<0.00200	0.100	0.0976	98	0.104	103	70-130	6	35	mg/kg	08.26.18 02:22	
m,p-Xylenes	<0.00401	0.200	0.217	109	0.233	116	70-130	7	35	mg/kg	08.26.18 02:22	
o-Xylene	<0.00200	0.100	0.106	106	0.114	113	70-130	7	35	mg/kg	08.26.18 02:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		107		109		70-130	%	08.26.18 02:22
4-Bromofluorobenzene	112		106		115		70-130	%	08.26.18 02:22

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061437

MB Sample Id: 7661266-1-BLK

Matrix: Solid

LCS Sample Id: 7661266-1-BKS

Prep Method: SW5030B

Date Prep: 08.28.18

LCSD Sample Id: 7661266-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.0983	98	70-130	5	35	mg/kg	08.28.18 08:45	
Toluene	<0.00202	0.101	0.0972	96	0.0929	93	70-130	5	35	mg/kg	08.28.18 08:45	
Ethylbenzene	<0.00202	0.101	0.111	110	0.105	105	70-130	6	35	mg/kg	08.28.18 08:45	
m,p-Xylenes	<0.00403	0.202	0.214	106	0.203	101	70-130	5	35	mg/kg	08.28.18 08:45	
o-Xylene	<0.00202	0.101	0.0985	98	0.0938	94	70-130	5	35	mg/kg	08.28.18 08:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		93		94		70-130	%	08.28.18 08:45
4-Bromofluorobenzene	94		93		92		70-130	%	08.28.18 08:45

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

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

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

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



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Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

MB Sample Id: 7661378-1-BLK

Matrix: Solid

LCS Sample Id: 7661378-1-BKS

Prep Method: SW5030B

Date Prep: 08.29.18

LCSD Sample Id: 7661378-1-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	0.0998	0.107	107	0.0937	94	70-130	13	35	mg/kg	08.29.18 08:15	
Toluene	<0.00200	0.0998	0.103	103	0.0902	90	70-130	13	35	mg/kg	08.29.18 08:15	
Ethylbenzene	<0.00200	0.0998	0.117	117	0.103	103	70-130	13	35	mg/kg	08.29.18 08:15	
m,p-Xylenes	<0.00399	0.200	0.224	112	0.197	98	70-130	13	35	mg/kg	08.29.18 08:15	
o-Xylene	<0.00200	0.0998	0.103	103	0.0906	91	70-130	13	35	mg/kg	08.29.18 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		97		95		70-130	%	08.29.18 08:15
4-Bromofluorobenzene	95		96		92		70-130	%	08.29.18 08:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061313

Parent Sample Id: 596319-008

Matrix: Soil

MS Sample Id: 596319-008 S

Prep Method: SW5030B

Date Prep: 08.25.18

MSD Sample Id: 596319-008 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	0.0734	73	0.0633	63	70-130	15	35	mg/kg	08.26.18 03:04	X
Toluene	<0.00202	0.101	0.0649	64	0.0571	57	70-130	13	35	mg/kg	08.26.18 03:04	X
Ethylbenzene	<0.00202	0.101	0.0672	67	0.0608	61	70-130	10	35	mg/kg	08.26.18 03:04	X
m,p-Xylenes	<0.00403	0.202	0.148	73	0.131	66	70-130	12	35	mg/kg	08.26.18 03:04	X
o-Xylene	<0.00202	0.101	0.0689	68	0.0592	59	70-130	15	35	mg/kg	08.26.18 03:04	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		98		70-130	%	08.26.18 03:04
4-Bromofluorobenzene	101		124		70-130	%	08.26.18 03:04

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061437

Parent Sample Id: 596789-001

Matrix: Soil

MS Sample Id: 596789-001 S

Prep Method: SW5030B

Date Prep: 08.28.18

MSD Sample Id: 596789-001 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	0.0530	53	0.0585	59	70-130	10	35	mg/kg	08.28.18 09:26	X
Toluene	<0.00200	0.0998	0.0511	51	0.0558	56	70-130	9	35	mg/kg	08.28.18 09:26	X
Ethylbenzene	<0.00200	0.0998	0.0580	58	0.0633	63	70-130	9	35	mg/kg	08.28.18 09:26	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.122	61	70-130	9	35	mg/kg	08.28.18 09:26	X
o-Xylene	<0.00200	0.0998	0.0516	52	0.0571	57	70-130	10	35	mg/kg	08.28.18 09:26	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	08.28.18 09:26
4-Bromofluorobenzene	90		90		70-130	%	08.28.18 09:26

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

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

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

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



LT Environmental, Inc.
PLU Delaware C SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

Parent Sample Id: 596847-001

Matrix: Soil

MS Sample Id: 596847-001 S

Prep Method: SW5030B

Date Prep: 08.29.18

MSD Sample Id: 596847-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0278	28	0.0346	34	70-130	22	35	mg/kg	08.29.18 08:56	X
Toluene	0.0129	0.100	0.0164	4	0.0608	47	70-130	115	35	mg/kg	08.29.18 08:56	XF
Ethylbenzene	0.00535	0.100	0.0118	6	0.0186	13	70-130	45	35	mg/kg	08.29.18 08:56	XF
m,p-Xylenes	0.0247	0.201	0.0299	3	0.0495	12	70-130	49	35	mg/kg	08.29.18 08:56	XF
o-Xylene	0.00639	0.100	0.0127	6	0.0133	7	70-130	5	35	mg/kg	08.29.18 08:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	08.29.18 08:56
4-Bromofluorobenzene	128		122		70-130	%	08.29.18 08:56

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

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

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

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



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Page 1 of 1

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

WWW.XENCO.COM

Phoenix, Arizona (480-355-0900)

Xenco Quote #

Xenco Job #

5916788

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes												
Company Name / Branch: LT Environmental, Inc. - Permian Office		Project Name/Number: BLU Delaware C SWD																
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705		Project Location: Carlsbad, NM																
Email: Abaker@ltenv.com Project Contact: Adrian Baker Samplers Name: Joseph S. Hernandez		Invoice To: XTO Energy - Kyle Litrell																
Phone No: (432) 704-5178		PO Number:																
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 3020	TPH EPA 8015	Chloride 300.1	Notes
1	BH14	3'	8/21/18	0920	S	1								X				
2	BH15	2'		0945	S	1								X				
3	BH16	2'		1130	S	1								X				
4	SS5A	6"		1110	S	1								X				
5	SS6A	6"		1115	S	1								X				
6	SS7A	6"		1120	S	1								X				
7	SS8A	6"		1125	S	1								X				
8	SS9A	6"		1130	S	1								X				
9																		
10																		

Notice: 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 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$9 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

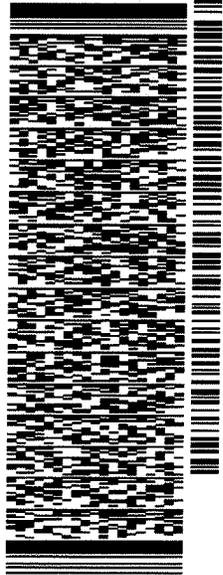
ORIGIN ID:MAFA (806) 794-1296
XENCO
XENCO
1211 W. FLORIDA AVE
MIDLAND TX 79701
UNITED STATES US

SHIP DATE: 22AUG18
ACTWGT: 30.00 LB
CAD: 101813706IN/ET4040
DIMS: 19x15x13 IN
BILL RECIPIENT

TO XENCO
XENCO
1211 W. FLORIDA AVE

MIDLAND TX 79701
REF: (806) 794-1296
PO

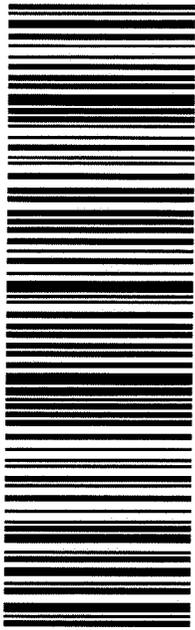
DEPT:



552J1.0309/DCA5

TRK# 7730 4137 4152
0201
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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/23/2018 11:00:00 AM

Work Order #: 596788

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

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel
Brianna Teel Date: 08/23/2018

Checklist reviewed by: Jessica Kramer
Jessica Kramer Date: 08/23/2018

Analytical Report 596789

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Delaware C SWD

10-SEP-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



10-SEP-18

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

Reference: XENCO Report No(s): **596789**
PLU Delaware C SWD
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596789. 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. 596789 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
Project Assistant

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Sample Cross Reference 596789

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH08	S	08-20-18 12:00	2 ft	596789-001
BH09	S	08-20-18 13:25	2 ft	596789-002
BH10	S	08-20-18 13:40	2 ft	596789-003
SS08	S	08-20-18 15:25	0.5 ft	596789-004



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Delaware C SWD

Project ID:
Work Order Number(s): 596789

Report Date: 10-SEP-18
Date Received: 08/23/2018

Sample receipt non conformances and comments:

PER CLIENTS EMAIL, CORRECTED SAMPLE 004 NAME FROM SS1A TO SS08 JKR 09/10/18
NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061437 BTEX by EPA 8021B

Lab Sample ID 596789-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 596789-001.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

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

Batch: LBA-3061634 BTEX by EPA 8021B

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



Certificate of Analysis Summary 596789

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C SWD

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Thu Aug-23-18 11:00 am
Report Date: 10-SEP-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	596789-001	596789-002	596789-003	596789-004		
	<i>Field Id:</i>	BH08	BH09	BH10	SS08		
	<i>Depth:</i>	2- ft	2- ft	2- ft	0.5- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Aug-20-18 12:00	Aug-20-18 13:25	Aug-20-18 13:40	Aug-20-18 15:25		
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-28-18 08:00	Aug-29-18 08:00	Aug-29-18 08:00	Aug-29-18 08:00		
	<i>Analyzed:</i>	Aug-28-18 10:47	Aug-29-18 13:20	Aug-29-18 14:21	Aug-29-18 14:41		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200		
	Toluene	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200		
	Ethylbenzene	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200		
	m,p-Xylenes	<0.00403 0.00403	<0.00404 0.00404	<0.00398 0.00398	<0.00399 0.00399		
	o-Xylene	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200		
Total Xylenes	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200			
Total BTEX	<0.00202 0.00202	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200			
Inorganic Anions by EPA 300	<i>Extracted:</i>	Aug-28-18 13:15	Aug-28-18 13:15	Aug-28-18 13:15	Aug-28-18 13:15		
	<i>Analyzed:</i>	Aug-28-18 14:41	Aug-28-18 14:47	Aug-28-18 15:08	Aug-28-18 14:14		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		24.1 1.00	<1.00 1.00	3.07 1.00	<1.00 1.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-24-18 07:00	Aug-24-18 07:00	Aug-24-18 07:00	Aug-24-18 07:00		
	<i>Analyzed:</i>	Aug-24-18 12:52	Aug-24-18 13:12	Aug-24-18 14:13	Aug-24-18 14:33		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0		
	Diesel Range Organics (DRO)	<15.0 15.0	<14.9 14.9	<15.0 15.0	61.9 15.0		
Oil Range Hydrocarbons (ORO)	<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0			
Total TPH	<15.0 15.0	<14.9 14.9	<15.0 15.0	61.9 15.0			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **BH08** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596789-001 Date Collected: 08.20.18 12.00 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.28.18 13.15 Basis: Wet Weight
 Seq Number: 3061510

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.1	1.00	mg/kg	08.28.18 14.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 12.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 12.52	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 12.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 12.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	08.24.18 12.52	
o-Terphenyl	84-15-1	94	%	70-135	08.24.18 12.52	



Certificate of Analytical Results 596789

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH08	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596789-001	Date Collected: 08.20.18 12.00	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.28.18 08.00	Basis: Wet Weight
Seq Number: 3061437		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.28.18 10.47	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.28.18 10.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.28.18 10.47		
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.28.18 10.47		



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **BH09** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596789-002 Date Collected: 08.20.18 13.25 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.28.18 13.15 Basis: Wet Weight
 Seq Number: 3061510

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<1.00	1.00	mg/kg	08.28.18 14.47	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	08.24.18 13.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	08.24.18 13.12	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	08.24.18 13.12	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	08.24.18 13.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	86	%	70-135	08.24.18 13.12	
o-Terphenyl	84-15-1	86	%	70-135	08.24.18 13.12	



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH09	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596789-002	Date Collected: 08.20.18 13.25	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.29.18 13.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.29.18 13.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	128	%	70-130	08.29.18 13.20		
1,4-Difluorobenzene	540-36-3	98	%	70-130	08.29.18 13.20		



Certificate of Analytical Results 596789

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **BH10** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596789-003 Date Collected: 08.20.18 13.40 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.28.18 13.15 Basis: Wet Weight
 Seq Number: 3061510

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3.07	1.00	mg/kg	08.28.18 15.08		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.24.18 07.00 Basis: Wet Weight
 Seq Number: 3061228

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 14.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 14.13	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 14.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 14.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.24.18 14.13	
o-Terphenyl	84-15-1	89	%	70-135	08.24.18 14.13	



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH10	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596789-003	Date Collected: 08.20.18 13.40	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.18 14.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.18 14.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.29.18 14.21		
1,4-Difluorobenzene	540-36-3	93	%	70-130	08.29.18 14.21		



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: SS08	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596789-004	Date Collected: 08.20.18 15.25	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.28.18 13.15	Basis: Wet Weight
Seq Number: 3061510		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<1.00	1.00	mg/kg	08.28.18 14.14	U	1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.24.18 07.00	Basis: Wet Weight
Seq Number: 3061228		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 14.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	61.9	15.0	mg/kg	08.24.18 14.33		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 14.33	U	1
Total TPH	PHC635	61.9	15.0	mg/kg	08.24.18 14.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.24.18 14.33	
o-Terphenyl	84-15-1	94	%	70-135	08.24.18 14.33	



Certificate of Analytical Results 596789



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS08	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596789-004	Date Collected: 08.20.18 15.25	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.29.18 14.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.18 14.41	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	90		%	70-130	08.29.18 14.41	
1,4-Difluorobenzene	540-36-3	95		%	70-130	08.29.18 14.41	



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



LT Environmental, Inc.

PLU Delaware C SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061510
 MB Sample Id: 7661279-1-BLK

Matrix: Solid
 LCS Sample Id: 7661279-1-BKS

Prep Method: E300P
 Date Prep: 08.28.18
 LCSD Sample Id: 7661279-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	50.0	50.4	101	51.0	102	90-110	1	20	mg/kg	08.28.18 14:03	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061510
 Parent Sample Id: 596789-004

Matrix: Soil
 MS Sample Id: 596789-004 S

Prep Method: E300P
 Date Prep: 08.28.18
 MSD Sample Id: 596789-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	50.0	49.4	99	49.5	99	90-110	0	20	mg/kg	08.28.18 14:19	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061510
 Parent Sample Id: 596910-005

Matrix: Soil
 MS Sample Id: 596910-005 S

Prep Method: E300P
 Date Prep: 08.28.18
 MSD Sample Id: 596910-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.6	50.0	64.1	97	64.1	97	90-110	0	20	mg/kg	08.28.18 15:41	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3061228
 MB Sample Id: 7661126-1-BLK

Matrix: Solid
 LCS Sample Id: 7661126-1-BKS

Prep Method: TX1005P
 Date Prep: 08.24.18
 LCSD Sample Id: 7661126-1-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	923	92	909	91	70-135	2	20	mg/kg	08.24.18 08:51	
Diesel Range Organics (DRO)	<15.0	1000	958	96	944	94	70-135	1	20	mg/kg	08.24.18 08:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		114		109		70-135	%	08.24.18 08:51
o-Terphenyl	105		100		102		70-135	%	08.24.18 08:51

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

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

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

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



LT Environmental, Inc.

PLU Delaware C SWD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3061228

Parent Sample Id: 596788-002

Matrix: Soil

MS Sample Id: 596788-002 S

Prep Method: TX1005P

Date Prep: 08.24.18

MSD Sample Id: 596788-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	997	1000	100	902	90	70-135	10	20		mg/kg	08.25.18 12:31	
Diesel Range Organics (DRO)	<15.0	997	1050	105	944	94	70-135	11	20		mg/kg	08.25.18 12:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		113		70-135	%	08.25.18 12:31
o-Terphenyl	112		99		70-135	%	08.25.18 12:31

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061437

MB Sample Id: 7661266-1-BLK

Matrix: Solid

LCS Sample Id: 7661266-1-BKS

Prep Method: SW5030B

Date Prep: 08.28.18

LCSD Sample Id: 7661266-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD	Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.0983	98	70-130	5	35		mg/kg	08.28.18 08:45	
Toluene	<0.00202	0.101	0.0972	96	0.0929	93	70-130	5	35		mg/kg	08.28.18 08:45	
Ethylbenzene	<0.00202	0.101	0.111	110	0.105	105	70-130	6	35		mg/kg	08.28.18 08:45	
m,p-Xylenes	<0.00403	0.202	0.214	106	0.203	101	70-130	5	35		mg/kg	08.28.18 08:45	
o-Xylene	<0.00202	0.101	0.0985	98	0.0938	94	70-130	5	35		mg/kg	08.28.18 08:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		93		94		70-130	%	08.28.18 08:45
4-Bromofluorobenzene	94		93		92		70-130	%	08.28.18 08:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

MB Sample Id: 7661378-1-BLK

Matrix: Solid

LCS Sample Id: 7661378-1-BKS

Prep Method: SW5030B

Date Prep: 08.29.18

LCSD Sample Id: 7661378-1-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	0.0998	0.107	107	0.0937	94	70-130	13	35		mg/kg	08.29.18 08:15	
Toluene	<0.00200	0.0998	0.103	103	0.0902	90	70-130	13	35		mg/kg	08.29.18 08:15	
Ethylbenzene	<0.00200	0.0998	0.117	117	0.103	103	70-130	13	35		mg/kg	08.29.18 08:15	
m,p-Xylenes	<0.00399	0.200	0.224	112	0.197	98	70-130	13	35		mg/kg	08.29.18 08:15	
o-Xylene	<0.00200	0.0998	0.103	103	0.0906	91	70-130	13	35		mg/kg	08.29.18 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		97		95		70-130	%	08.29.18 08:15
4-Bromofluorobenzene	95		96		92		70-130	%	08.29.18 08:15

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

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

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

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



LT Environmental, Inc.

PLU Delaware C SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061437

Parent Sample Id: 596789-001

Matrix: Soil

MS Sample Id: 596789-001 S

Prep Method: SW5030B

Date Prep: 08.28.18

MSD Sample Id: 596789-001 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	0.0530	53	0.0585	59	70-130	10	35	mg/kg	08.28.18 09:26	X
Toluene	<0.00200	0.0998	0.0511	51	0.0558	56	70-130	9	35	mg/kg	08.28.18 09:26	X
Ethylbenzene	<0.00200	0.0998	0.0580	58	0.0633	63	70-130	9	35	mg/kg	08.28.18 09:26	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.122	61	70-130	9	35	mg/kg	08.28.18 09:26	X
o-Xylene	<0.00200	0.0998	0.0516	52	0.0571	57	70-130	10	35	mg/kg	08.28.18 09:26	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	08.28.18 09:26
4-Bromofluorobenzene	90		90		70-130	%	08.28.18 09:26

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

Parent Sample Id: 596847-001

Matrix: Soil

MS Sample Id: 596847-001 S

Prep Method: SW5030B

Date Prep: 08.29.18

MSD Sample Id: 596847-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0278	28	0.0346	34	70-130	22	35	mg/kg	08.29.18 08:56	X
Toluene	0.0129	0.100	0.0164	4	0.0608	47	70-130	115	35	mg/kg	08.29.18 08:56	XF
Ethylbenzene	0.00535	0.100	0.0118	6	0.0186	13	70-130	45	35	mg/kg	08.29.18 08:56	XF
m,p-Xylenes	0.0247	0.201	0.0299	3	0.0495	12	70-130	49	35	mg/kg	08.29.18 08:56	XF
o-Xylene	0.00639	0.100	0.0127	6	0.0133	7	70-130	5	35	mg/kg	08.29.18 08:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	08.29.18 08:56
4-Bromofluorobenzene	128		122		70-130	%	08.29.18 08:56

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

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

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

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



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Xenco Job #

5916769

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes									
Company Name / Branch: LT Environmental, Inc. - Permian Office		Project Name/Number: PW Delaware & SWP		Xenco Quote #		Xenco Job #									
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705		Project Location: Carlsbad, NM		Date Time:		Date Time:									
Email: Abaker@xenco.com		Invoice To: XTO Energy - Kyle Linnell		Date Time:		Date Time:									
Project Contact: Adrian Baker		PO Number:		Date Time:		Date Time:									
Sampler's Name: Joseph S. Hernandez		Turnaround Time (Business days):		Date Time:		Date Time:									
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Notes
1	BH08	2'	8/20/18	1200	S	1									
2	BH09	2'		1345	S	1									
3	BH10	2'		1340	S	1									
4	SS1A	0.5'		1525	S	1									
5															
6															
7															
8															
9															
10															
<input type="checkbox"/> Same Day TAT <input checked="" type="checkbox"/> 5 Day TAT <input type="checkbox"/> Next Day EMERGENCY <input type="checkbox"/> 7 Day TAT <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> Contract TAT <input type="checkbox"/> 3 Day EMERGENCY		<input type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC+ Forms <input type="checkbox"/> TRRP Checklist		<input type="checkbox"/> Level IV (Full Data Pkg /raw data) <input type="checkbox"/> TRRP Level IV <input type="checkbox"/> UST / RG -411		BTEX EPA 8020 TPH EPA 8015 Chloride 300.1		W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air							
Relinquished by: <i>[Signature]</i> Date Time: 8/22 9:36 Relinquished by: <i>[Signature]</i> Date Time: 8/22 15:30 Relinquished by: <i>[Signature]</i> Date Time: 8/23/18 11:00		Received By: <i>[Signature]</i> Received By: <i>[Signature]</i> Received By: <i>[Signature]</i>		Relinquished By: <i>[Signature]</i> Relinquished By: <i>[Signature]</i> Relinquished By: <i>[Signature]</i>		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00							
TAT Starts Day received by Lab, if received by 5:00 pm SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00		Date Time: 8/22 9:36 Date Time: 8/22 15:30 Date Time: 8/23/18 11:00							

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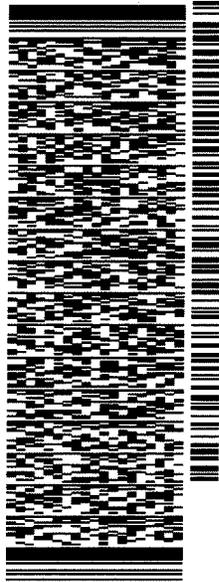
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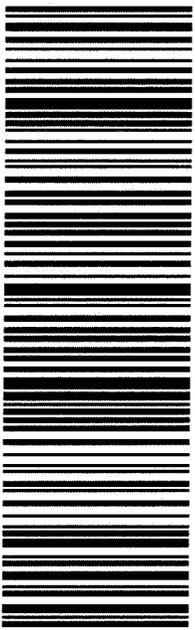


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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/23/2018 11:00:00 AM

Work Order #: 596789

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

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel
Brianna Teel Date: 08/23/2018

Checklist reviewed by: Jessica Kramer
Jessica Kramer Date: 08/23/2018

Analytical Report 596790

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU Delaware C SWD

10-SEP-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)



10-SEP-18

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

Reference: XENCO Report No(s): **596790**
PLU Delaware C SWD
Project Address: Carlsbad, NM

Adrian Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596790. 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. 596790 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
Project Assistant

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



Sample Cross Reference 596790

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS09	S	08-20-18 15:30	0.5 ft	596790-001
SS10	S	08-20-18 15:35	0.5 ft	596790-002
BH11	S	08-20-18 14:30	2 ft	596790-003
BH12	S	08-20-18 15:20	2 ft	596790-004
SS11	S	08-20-18 15:40	0.5 ft	596790-005
BH 13	S	08-20-18 16:30	12 ft	596790-006



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Delaware C SWD

Project ID:
Work Order Number(s): 596790

Report Date: 10-SEP-18
Date Received: 08/23/2018

Sample receipt non conformances and comments:

PER CLIENTS EMAIL, CORRECTED SAMPLE NAMES FOR SAMPLE 001,002,005 JKR 09/10/18
NEW VERSION GENERATED

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061634 BTEX by EPA 8021B

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



Certificate of Analysis Summary 596790

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C SWD

Project Id:
Contact: Adrian Baker
Project Location: Carlsbad, NM

Date Received in Lab: Thu Aug-23-18 11:00 am
Report Date: 10-SEP-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	596790-001	596790-002	596790-003	596790-004	596790-005	596790-006
	<i>Field Id:</i>	SS09	SS10	BH11	BH12	SS11	BH 13
	<i>Depth:</i>	0.5- ft	0.5- ft	2- ft	2- ft	0.5- ft	12- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-20-18 15:30	Aug-20-18 15:35	Aug-20-18 14:30	Aug-20-18 15:20	Aug-20-18 15:40	Aug-20-18 16:30
BTEX by EPA 8021B	<i>Extracted:</i>	Aug-29-18 08:00					
	<i>Analyzed:</i>	Aug-29-18 15:02	Aug-29-18 15:23	Aug-29-18 16:05	Aug-29-18 15:44	Aug-29-18 16:27	Aug-29-18 16:48
	<i>Units/RL:</i>	mg/kg RL					
	Benzene	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
	Toluene	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
	Ethylbenzene	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
	m,p-Xylenes	<0.00401 0.00401	<0.00403 0.00403	<0.00398 0.00398	<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402
	o-Xylene	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201
Total Xylenes	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Total BTEX	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Aug-24-18 13:00					
	<i>Analyzed:</i>	Aug-24-18 14:38	Aug-24-18 14:55	Aug-24-18 15:00	Aug-24-18 15:06	Aug-24-18 15:38	Aug-24-18 15:54
	<i>Units/RL:</i>	mg/kg RL					
Chloride	6.32 4.99	<4.99 4.99	147 4.99	500 5.00	64.4 4.96	90.0 4.95	
TPH by SW8015 Mod	<i>Extracted:</i>	Aug-23-18 15:00					
	<i>Analyzed:</i>	Aug-24-18 01:31	Aug-24-18 01:51	Aug-24-18 02:11	Aug-24-18 02:31	Aug-24-18 02:50	Aug-24-18 03:10
	<i>Units/RL:</i>	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Diesel Range Organics (DRO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
	Oil Range Hydrocarbons (ORO)	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
 Project Assistant



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS09	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-001	Date Collected: 08.20.18 15.30	Sample Depth: 0.5 ft
Analytical Method: Inorganic Anions by EPA 300		Prep Method: E300P
Tech: SCM		% Moisture:
Analyst: SCM	Date Prep: 08.24.18 13.00	Basis: Wet Weight
Seq Number: 3061240		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.32	4.99	mg/kg	08.24.18 14.38		1

Analytical Method: TPH by SW8015 Mod		Prep Method: TX1005P
Tech: ARM		% Moisture:
Analyst: ARM	Date Prep: 08.23.18 15.00	Basis: Wet Weight
Seq Number: 3061132		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 01.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 01.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 01.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	08.24.18 01.31	
o-Terphenyl	84-15-1	103	%	70-135	08.24.18 01.31	



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS09	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-001	Date Collected: 08.20.18 15.30	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.29.18 15.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.29.18 15.02	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	91		%	70-130	08.29.18 15.02	
4-Bromofluorobenzene	460-00-4	92		%	70-130	08.29.18 15.02	



Certificate of Analytical Results 596790



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: **SS10** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596790-002 Date Collected: 08.20.18 15.35 Sample Depth: 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.24.18 13.00 Basis: Wet Weight
 Seq Number: 3061240

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.24.18 14.55	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight
 Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 01.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 01.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 01.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 01.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	08.24.18 01.51	
o-Terphenyl	84-15-1	90	%	70-135	08.24.18 01.51	



Certificate of Analytical Results 596790



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS10	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-002	Date Collected: 08.20.18 15.35	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.29.18 15.23	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.29.18 15.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.29.18 15.23		
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.29.18 15.23		



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **BH11** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596790-003 Date Collected: 08.20.18 14.30 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.24.18 13.00 Basis: Wet Weight
 Seq Number: 3061240

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	147	4.99	mg/kg	08.24.18 15.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight
 Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 02.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 02.11	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 02.11	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 02.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	08.24.18 02.11	
o-Terphenyl	84-15-1	92	%	70-135	08.24.18 02.11	



Certificate of Analytical Results 596790



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH11	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-003	Date Collected: 08.20.18 14.30	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.18 16.05	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.18 16.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.29.18 16.05		
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.29.18 16.05		



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **BH12** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596790-004 Date Collected: 08.20.18 15.20 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.24.18 13.00 Basis: Wet Weight
 Seq Number: 3061240

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	500	5.00	mg/kg	08.24.18 15.06		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight
 Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 02.31	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 02.31	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 02.31	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 02.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.24.18 02.31	
o-Terphenyl	84-15-1	91	%	70-135	08.24.18 02.31	



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: BH12	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-004	Date Collected: 08.20.18 15.20	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.29.18 15.44	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.29.18 15.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	08.29.18 15.44		
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.29.18 15.44		



Certificate of Analytical Results 596790



LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **SS11** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596790-005 Date Collected: 08.20.18 15.40 Sample Depth: 0.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.24.18 13.00 Basis: Wet Weight
 Seq Number: 3061240

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	64.4	4.96	mg/kg	08.24.18 15.38		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight
 Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 02.50	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 02.50	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 02.50	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 02.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.24.18 02.50	
o-Terphenyl	84-15-1	93	%	70-135	08.24.18 02.50	



Certificate of Analytical Results 596790



LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: SS11	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-005	Date Collected: 08.20.18 15.40	Sample Depth: 0.5 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.18 16.27	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.18 16.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	08.29.18 16.27		
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.29.18 16.27		



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO PLU Delaware C SWD

Sample Id: **BH 13** Matrix: Soil Date Received: 08.23.18 11.00
 Lab Sample Id: 596790-006 Date Collected: 08.20.18 16.30 Sample Depth: 12 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 08.24.18 13.00 Basis: Wet Weight
 Seq Number: 3061240

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.0	4.95	mg/kg	08.24.18 15.54		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight
 Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.24.18 03.10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.24.18 03.10	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.24.18 03.10	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.24.18 03.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	08.24.18 03.10	
o-Terphenyl	84-15-1	94	%	70-135	08.24.18 03.10	



Certificate of Analytical Results 596790

LT Environmental, Inc., Arvada, CO

PLU Delaware C SWD

Sample Id: BH 13	Matrix: Soil	Date Received: 08.23.18 11.00
Lab Sample Id: 596790-006	Date Collected: 08.20.18 16.30	Sample Depth: 12 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: ALJ		% Moisture:
Analyst: ALJ	Date Prep: 08.29.18 08.00	Basis: Wet Weight
Seq Number: 3061634		

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.29.18 16.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.29.18 16.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	08.29.18 16.48		
4-Bromofluorobenzene	460-00-4	92	%	70-130	08.29.18 16.48		



LT Environmental, Inc.

PLU Delaware C SWD

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061240
 MB Sample Id: 7661143-1-BLK

Matrix: Solid
 LCS Sample Id: 7661143-1-BKS

Prep Method: E300P
 Date Prep: 08.24.18
 LCSD Sample Id: 7661143-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	242	97	245	98	90-110	1	20	mg/kg	08.24.18 14:27	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061240
 Parent Sample Id: 596790-001

Matrix: Soil
 MS Sample Id: 596790-001 S

Prep Method: E300P
 Date Prep: 08.24.18
 MSD Sample Id: 596790-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.32	250	250	97	250	97	90-110	0	20	mg/kg	08.24.18 14:44	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3061240
 Parent Sample Id: 596977-003

Matrix: Soil
 MS Sample Id: 596977-003 S

Prep Method: E300P
 Date Prep: 08.24.18
 MSD Sample Id: 596977-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	623	251	835	84	833	84	90-110	0	20	mg/kg	08.24.18 16:27	X

Analytical Method: TPH by SW8015 Mod

Seq Number: 3061132
 MB Sample Id: 7661027-1-BLK

Matrix: Solid
 LCS Sample Id: 7661027-1-BKS

Prep Method: TX1005P
 Date Prep: 08.23.18
 LCSD Sample Id: 7661027-1-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	967	97	945	95	70-135	2	20	mg/kg	08.23.18 18:59	
Diesel Range Organics (DRO)	<15.0	1000	1000	100	970	97	70-135	3	20	mg/kg	08.23.18 18:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		119		116		70-135	%	08.23.18 18:59
o-Terphenyl	99		99		94		70-135	%	08.23.18 18:59

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

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

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

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



LT Environmental, Inc.
PLU Delaware C SWD

Analytical Method: TPH by SW8015 Mod

Seq Number: 3061132

Parent Sample Id: 596598-001

Matrix: Soil

MS Sample Id: 596598-001 S

Prep Method: TX1005P

Date Prep: 08.23.18

MSD Sample Id: 596598-001 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)	27.6	1000	920	89	938	91	70-135	2	20	mg/kg	08.23.18 19:57	
Diesel Range Organics (DRO)	233	1000	1120	89	1140	91	70-135	2	20	mg/kg	08.23.18 19:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		123		70-135	%	08.23.18 19:57
o-Terphenyl	106		106		70-135	%	08.23.18 19:57

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

MB Sample Id: 7661378-1-BLK

Matrix: Solid

LCS Sample Id: 7661378-1-BKS

Prep Method: SW5030B

Date Prep: 08.29.18

LCSD Sample Id: 7661378-1-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	0.0998	0.107	107	0.0937	94	70-130	13	35	mg/kg	08.29.18 08:15	
Toluene	<0.00200	0.0998	0.103	103	0.0902	90	70-130	13	35	mg/kg	08.29.18 08:15	
Ethylbenzene	<0.00200	0.0998	0.117	117	0.103	103	70-130	13	35	mg/kg	08.29.18 08:15	
m,p-Xylenes	<0.00399	0.200	0.224	112	0.197	98	70-130	13	35	mg/kg	08.29.18 08:15	
o-Xylene	<0.00200	0.0998	0.103	103	0.0906	91	70-130	13	35	mg/kg	08.29.18 08:15	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		97		95		70-130	%	08.29.18 08:15
4-Bromofluorobenzene	95		96		92		70-130	%	08.29.18 08:15

Analytical Method: BTEX by EPA 8021B

Seq Number: 3061634

Parent Sample Id: 596847-001

Matrix: Soil

MS Sample Id: 596847-001 S

Prep Method: SW5030B

Date Prep: 08.29.18

MSD Sample Id: 596847-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0278	28	0.0346	34	70-130	22	35	mg/kg	08.29.18 08:56	X
Toluene	0.0129	0.100	0.0164	4	0.0608	47	70-130	115	35	mg/kg	08.29.18 08:56	XF
Ethylbenzene	0.00535	0.100	0.0118	6	0.0186	13	70-130	45	35	mg/kg	08.29.18 08:56	XF
m,p-Xylenes	0.0247	0.201	0.0299	3	0.0495	12	70-130	49	35	mg/kg	08.29.18 08:56	XF
o-Xylene	0.00639	0.100	0.0127	6	0.0133	7	70-130	5	35	mg/kg	08.29.18 08:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		90		70-130	%	08.29.18 08:56
4-Bromofluorobenzene	128		122		70-130	%	08.29.18 08:56

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

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

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

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



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Page 1 of 1

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

www.xenco.com

Phoenix, Arizona (480-355-0900)

Client / Reporting Information		Project Information		Analytical Information		Matrix Codes												
Company Name / Branch: LT Environmental, Inc. - Permian Office		Project Name/Number: PU Delaware C SWD		Xenco Quote #		Xenco Job #												
Company Address: 3300 North "A" Street, Building 1, Unit #103, Midland, TX 79705		Project Location: Carlsbad, NM		546790														
Email: Abaker@ltemv.com Project Contact: Adrian Baker Samplers Name: Joseph S. Hernandez		Invoice To: XTO Energy - Kyle Litrell																
Phone No: (432) 704-5178		PO Number:																
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HC	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX EPA 8030	TPH EPA 8015	Chloride 300.1	Field Comments
1	SS2A	0.5'	8/20/18	1530	S	1									X	X	X	
2	SS3A	0.5'		1535	S	1									X	X	X	
3	BH11	2'		1430	S	1									X	X	X	
4	BH12	2'		1520	S	1									X	X	X	
5	SS4A	0.5'		1540	S	1									X	X	X	
6	BH13	12'		1630	S	1									X	X	X	
7																		
8																		
9																		
10																		

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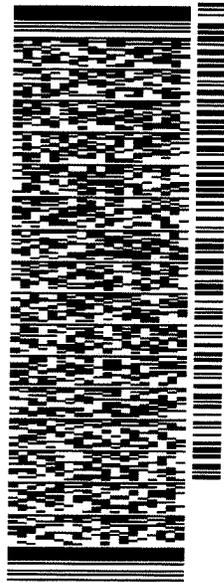
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ACT WGT: 30.00 LB
CAD: 10/8/13/06NET/4040
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BILL RECIPIENT

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XENCO
1211 W. FLORIDA AVE

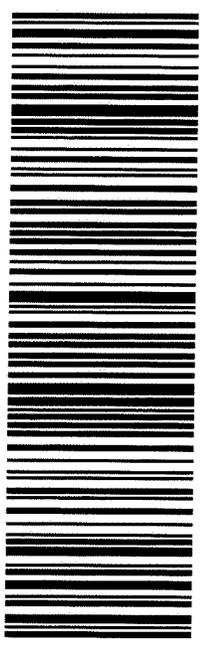
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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 08/23/2018 11:00:00 AM

Work Order #: 596790

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

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08/23/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/23/2018
Jessica Kramer

Analytical Report 641128

for
LT Environmental, Inc.

Project Manager: Dan Moir

PLU Delaware C

012919038

30-OCT-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 (2017-142), North Carolina (681)

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-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)



30-OCT-19

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

Reference: XENCO Report No(s): **641128**
PLU Delaware C
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) 641128. 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. 641128 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
Project Assistant

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Sample Cross Reference 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PH17	S	10-24-19 11:00	1 ft	641128-001
PH17A	S	10-24-19 11:10	2 ft	641128-002
PH18	S	10-24-19 11:25	1 ft	641128-003
PH18A	S	10-24-19 11:30	2 ft	641128-004
PH19	S	10-24-19 11:35	1 ft	641128-005
PH19A	S	10-24-19 11:40	2 ft	641128-006
PH20	S	10-24-19 11:50	1 ft	641128-007
PH20A	S	10-24-19 11:55	2 ft	641128-008
PH21	S	10-24-19 12:10	1 ft	641128-009
PH21A	S	10-24-19 12:15	2 ft	641128-010
PH22	S	10-24-19 12:25	1 ft	641128-011
PH22A	S	10-24-19 12:35	2 ft	641128-012
PH23	S	10-24-19 12:45	1 ft	641128-013
PH23A	S	10-24-19 12:50	2 ft	641128-014
PH24	S	10-24-19 13:10	1 ft	641128-015
PH24A	S	10-24-19 13:20	2 ft	641128-016



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU Delaware C

Project ID: 012919038
Work Order Number(s): 641128

Report Date: 30-OCT-19
Date Received: 10/25/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3105876 BTEX by EPA 8021B

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



Certificate of Analysis Summary 641128

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C

Project Id: 012919038
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Oct-25-19 10:32 am
Report Date: 30-OCT-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641128-001	641128-002	641128-003	641128-004	641128-005	641128-006
	<i>Field Id:</i>	PH17	PH17A	PH18	PH18A	PH19	PH19A
	<i>Depth:</i>	1- ft	2- ft	1- ft	2- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-24-19 11:00	Oct-24-19 11:10	Oct-24-19 11:25	Oct-24-19 11:30	Oct-24-19 11:35	Oct-24-19 11:40
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00					
	<i>Analyzed:</i>	Oct-30-19 00:43	Oct-30-19 01:03	Oct-30-19 01:23	Oct-30-19 01:44	Oct-30-19 02:04	Oct-30-19 02:24
	<i>Units/RL:</i>	mg/kg RL					
	Benzene	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
	Toluene	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
	Ethylbenzene	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
	m,p-Xylenes	<0.00402 0.00402	<0.00400 0.00400	<0.00417 0.00417	<0.00397 0.00397	<0.00399 0.00399	<0.00399 0.00399
	o-Xylene	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
Total BTEX	<0.00201 0.00201	<0.00200 0.00200	<0.00208 0.00208	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 11:25	Oct-28-19 13:20				
	<i>Analyzed:</i>	Oct-28-19 14:35	Oct-28-19 14:41	Oct-28-19 14:46	Oct-28-19 14:52	Oct-28-19 14:58	Oct-28-19 15:56
	<i>Units/RL:</i>	mg/kg RL					
Chloride	912 4.97	577 4.97	519 5.04	13.8 4.98	614 5.00	16.3 4.96	
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 13:00					
	<i>Analyzed:</i>	Oct-28-19 16:05	Oct-28-19 17:01	Oct-28-19 17:19	Oct-28-19 17:38	Oct-28-19 17:56	Oct-28-19 18:15
	<i>Units/RL:</i>	mg/kg RL					
	Gasoline Range Hydrocarbons (GRO)	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
	Diesel Range Organics (DRO)	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
	Motor Oil Range Hydrocarbons (MRO)	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
	Total GRO-DRO	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
	Total TPH	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641128

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C

Project Id: 012919038
Contact: Dan Moir
Project Location:

Date Received in Lab: Fri Oct-25-19 10:32 am
Report Date: 30-OCT-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641128-007	641128-008	641128-009	641128-010	641128-011	641128-012
	<i>Field Id:</i>	PH20	PH20A	PH21	PH21A	PH22	PH22A
	<i>Depth:</i>	1- ft	2- ft	1- ft	2- ft	1- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-24-19 11:50	Oct-24-19 11:55	Oct-24-19 12:10	Oct-24-19 12:15	Oct-24-19 12:25	Oct-24-19 12:35
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00					
	<i>Analyzed:</i>	Oct-30-19 03:42	Oct-30-19 04:02	Oct-30-19 04:22	Oct-30-19 04:43	Oct-30-19 05:03	Oct-30-19 05:23
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397	<0.00403 0.00403	<0.00399 0.00399	<0.00401 0.00401	<0.00396 0.00396
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 13:20					
	<i>Analyzed:</i>	Oct-28-19 16:01	Oct-28-19 16:17	Oct-28-19 16:22	Oct-28-19 16:37	Oct-28-19 16:42	Oct-28-19 16:48
	<i>Units/RL:</i>	mg/kg RL					
Chloride		579 4.98	1200 5.02	833 4.99	1480 24.9	1060 5.05	931 5.00
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 13:00					
	<i>Analyzed:</i>	Oct-28-19 18:34	Oct-28-19 18:52	Oct-28-19 19:11	Oct-28-19 19:30	Oct-28-19 20:08	Oct-28-19 20:26
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total GRO-DRO		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<49.9 49.9

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 641128

LT Environmental, Inc., Arvada, CO

Project Name: PLU Delaware C

Project Id: 012919038

Contact: Dan Moir

Project Location:

Date Received in Lab: Fri Oct-25-19 10:32 am

Report Date: 30-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	641128-013	641128-014	641128-015	641128-016		
	<i>Field Id:</i>	PH23	PH23A	PH24	PH24A		
	<i>Depth:</i>	1- ft	2- ft	1- ft	2- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-24-19 12:45	Oct-24-19 12:50	Oct-24-19 13:10	Oct-24-19 13:20		
BTEX by EPA 8021B SUB: T104704400-19-19	<i>Extracted:</i>	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00	Oct-29-19 14:00		
	<i>Analyzed:</i>	Oct-30-19 05:43	Oct-30-19 06:03	Oct-30-19 06:23	Oct-30-19 06:43		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
	Toluene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
	Ethylbenzene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
	m,p-Xylenes	<0.00398 0.00398	<0.00400 0.00400	<0.00399 0.00399	<0.00399 0.00399		
	o-Xylene	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Total BTEX	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200			
Chloride by EPA 300 SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 13:20	Oct-28-19 13:20	Oct-28-19 13:20	Oct-28-19 13:20		
	<i>Analyzed:</i>	Oct-28-19 16:53	Oct-28-19 16:58	Oct-28-19 17:03	Oct-28-19 17:08		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride	1260 5.05	1260 5.05	384 4.96	319 5.02			
TPH by SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-28-19 13:00	Oct-28-19 13:00	Oct-28-19 13:00	Oct-28-19 13:00		
	<i>Analyzed:</i>	Oct-28-19 20:45	Oct-28-19 21:03	Oct-28-19 21:22	Oct-28-19 21:41		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Gasoline Range Hydrocarbons (GRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0		
	Diesel Range Organics (DRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0		
	Motor Oil Range Hydrocarbons (MRO)	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0		
	Total GRO-DRO	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0		
	Total TPH	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0		

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Jessica Kramer
Project Assistant



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: **PH17** Matrix: Soil Date Received: 10.25.19 10.32
 Lab Sample Id: 641128-001 Date Collected: 10.24.19 11.00 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.28.19 11.25 Basis: Wet Weight
 Seq Number: 3105644 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	912	4.97	mg/kg	10.28.19 14.35		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.28.19 13.00 Basis: Wet Weight
 Seq Number: 3105660 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.28.19 16.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.28.19 16.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.28.19 16.05	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.28.19 16.05	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.28.19 16.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	10.28.19 16.05	
o-Terphenyl	84-15-1	98	%	70-135	10.28.19 16.05	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH17	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-001	Date Collected: 10.24.19 11.00	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	10.30.19 00.43	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
Total BTEX		<0.00201	0.00201	mg/kg	10.30.19 00.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	10.30.19 00.43		
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.30.19 00.43		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH17A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-002	Date Collected: 10.24.19 11.10	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.28.19 11.25	Basis: Wet Weight
Seq Number: 3105644		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	577	4.97	mg/kg	10.28.19 14.41		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.28.19 17.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.28.19 17.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.28.19 17.01	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.28.19 17.01	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.28.19 17.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	10.28.19 17.01	
o-Terphenyl	84-15-1	98	%	70-135	10.28.19 17.01	



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LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH17A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-002	Date Collected: 10.24.19 11.10	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.30.19 01.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 01.03	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98		%	70-130	10.30.19 01.03	
4-Bromofluorobenzene	460-00-4	106		%	70-130	10.30.19 01.03	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: **PH18** Matrix: Soil Date Received: 10.25.19 10.32
 Lab Sample Id: 641128-003 Date Collected: 10.24.19 11.25 Sample Depth: 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 10.28.19 11.25 Basis: Wet Weight
 Seq Number: 3105644 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	519	5.04	mg/kg	10.28.19 14.46		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.28.19 13.00 Basis: Wet Weight
 Seq Number: 3105660 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 17.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 17.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 17.19	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 17.19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 17.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.28.19 17.19	
o-Terphenyl	84-15-1	97	%	70-135	10.28.19 17.19	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH18	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-003	Date Collected: 10.24.19 11.25	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
Toluene	108-88-3	<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
Ethylbenzene	100-41-4	<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
m,p-Xylenes	179601-23-1	<0.00417	0.00417	mg/kg	10.30.19 01.23	U	1
o-Xylene	95-47-6	<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
Total Xylenes	1330-20-7	<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
Total BTEX		<0.00208	0.00208	mg/kg	10.30.19 01.23	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99		%	70-130	10.30.19 01.23	
1,4-Difluorobenzene	540-36-3	97		%	70-130	10.30.19 01.23	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH18A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-004	Date Collected: 10.24.19 11.30	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.28.19 11.25	Basis: Wet Weight
Seq Number: 3105644		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	13.8	4.98	mg/kg	10.28.19 14.52		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.28.19 17.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.28.19 17.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.28.19 17.38	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.28.19 17.38	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.28.19 17.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.28.19 17.38	
o-Terphenyl	84-15-1	100	%	70-135	10.28.19 17.38	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH18A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-004	Date Collected: 10.24.19 11.30	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.30.19 01.44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.30.19 01.44	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94		%	70-130	10.30.19 01.44	
4-Bromofluorobenzene	460-00-4	106		%	70-130	10.30.19 01.44	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH19	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-005	Date Collected: 10.24.19 11.35	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: CHE		% Moisture:
Analyst: CHE	Date Prep: 10.28.19 11.25	Basis: Wet Weight
Seq Number: 3105644		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	614	5.00	mg/kg	10.28.19 14.58		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 17.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 17.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 17.56	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 17.56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 17.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	10.28.19 17.56	
o-Terphenyl	84-15-1	96	%	70-135	10.28.19 17.56	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH19	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-005	Date Collected: 10.24.19 11.35	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.30.19 02.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 02.04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	10.30.19 02.04		
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.30.19 02.04		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: **PH19A** Matrix: Soil Date Received: 10.25.19 10.32
 Lab Sample Id: 641128-006 Date Collected: 10.24.19 11.40 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 10.28.19 13.20 Basis: Wet Weight
 Seq Number: 3105654 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	16.3	4.96	mg/kg	10.28.19 15.56		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.28.19 13.00 Basis: Wet Weight
 Seq Number: 3105660 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.28.19 18.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.28.19 18.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.28.19 18.15	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.28.19 18.15	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.28.19 18.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	10.28.19 18.15	
o-Terphenyl	84-15-1	100	%	70-135	10.28.19 18.15	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH19A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-006	Date Collected: 10.24.19 11.40	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.30.19 02.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 02.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	10.30.19 02.24		
1,4-Difluorobenzene	540-36-3	95	%	70-130	10.30.19 02.24		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH20	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-007	Date Collected: 10.24.19 11.50	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	579	4.98	mg/kg	10.28.19 16.01		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 18.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 18.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 18.34	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 18.34	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 18.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	10.28.19 18.34	
o-Terphenyl	84-15-1	95	%	70-135	10.28.19 18.34	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH20	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-007	Date Collected: 10.24.19 11.50	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.30.19 03.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.30.19 03.42	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99		%	70-130	10.30.19 03.42	
1,4-Difluorobenzene	540-36-3	97		%	70-130	10.30.19 03.42	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH20A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-008	Date Collected: 10.24.19 11.55	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1200	5.02	mg/kg	10.28.19 16.17		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 18.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 18.52	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 18.52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	10.28.19 18.52	
o-Terphenyl	84-15-1	98	%	70-135	10.28.19 18.52	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH20A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-008	Date Collected: 10.24.19 11.55	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	10.30.19 04.02	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.30.19 04.02	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	10.30.19 04.02		
4-Bromofluorobenzene	460-00-4	98	%	70-130	10.30.19 04.02		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH21	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-009	Date Collected: 10.24.19 12.10	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	833	4.99	mg/kg	10.28.19 16.22		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	10.28.19 19.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	10.28.19 19.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.28.19 19.11	U	1
Total GRO-DRO	PHC628	<49.8	49.8	mg/kg	10.28.19 19.11	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.28.19 19.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	10.28.19 19.11	
o-Terphenyl	84-15-1	97	%	70-135	10.28.19 19.11	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH21	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-009	Date Collected: 10.24.19 12.10	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	10.30.19 04.22	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
Total BTEX		<0.00202	0.00202	mg/kg	10.30.19 04.22	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97		%	70-130	10.30.19 04.22	
4-Bromofluorobenzene	460-00-4	103		%	70-130	10.30.19 04.22	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: **PH21A** Matrix: Soil Date Received: 10.25.19 10.32
 Lab Sample Id: 641128-010 Date Collected: 10.24.19 12.15 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 10.28.19 13.20 Basis: Wet Weight
 Seq Number: 3105654 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1480	24.9	mg/kg	10.28.19 16.37		5

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.28.19 13.00 Basis: Wet Weight
 Seq Number: 3105660 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.28.19 19.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.28.19 19.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.28.19 19.30	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.28.19 19.30	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.28.19 19.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	10.28.19 19.30	
o-Terphenyl	84-15-1	96	%	70-135	10.28.19 19.30	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH21A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-010	Date Collected: 10.24.19 12.15	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.30.19 04.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 04.43	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103		%	70-130	10.30.19 04.43	
1,4-Difluorobenzene	540-36-3	98		%	70-130	10.30.19 04.43	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH22	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-011	Date Collected: 10.24.19 12.25	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1060	5.05	mg/kg	10.28.19 16.42		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 20.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 20.08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 20.08	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 20.08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 20.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	10.28.19 20.08	
o-Terphenyl	84-15-1	96	%	70-135	10.28.19 20.08	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH22	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-011	Date Collected: 10.24.19 12.25	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	10.30.19 05.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 05.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.30.19 05.03		
4-Bromofluorobenzene	460-00-4	109	%	70-130	10.30.19 05.03		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: **PH22A** Matrix: Soil Date Received: 10.25.19 10.32
 Lab Sample Id: 641128-012 Date Collected: 10.24.19 12.35 Sample Depth: 2 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: SPC % Moisture:
 Analyst: SPC Date Prep: 10.28.19 13.20 Basis: Wet Weight
 Seq Number: 3105654 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	931	5.00	mg/kg	10.28.19 16.48		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 10.28.19 13.00 Basis: Wet Weight
 Seq Number: 3105660 SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.28.19 20.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.28.19 20.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.28.19 20.26	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.28.19 20.26	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.28.19 20.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	10.28.19 20.26	
o-Terphenyl	84-15-1	98	%	70-135	10.28.19 20.26	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH22A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-012	Date Collected: 10.24.19 12.35	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	10.30.19 05.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	10.30.19 05.23	U	1
			%				
Surrogate	Cas Number	Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.30.19 05.23		
4-Bromofluorobenzene	460-00-4	104	%	70-130	10.30.19 05.23		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH23	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-013	Date Collected: 10.24.19 12.45	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1260	5.05	mg/kg	10.28.19 16.53		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 20.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 20.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 20.45	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 20.45	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 20.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	10.28.19 20.45	
o-Terphenyl	84-15-1	95	%	70-135	10.28.19 20.45	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH23	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-013	Date Collected: 10.24.19 12.45	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	10.30.19 05.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	10.30.19 05.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	10.30.19 05.43		
4-Bromofluorobenzene	460-00-4	100	%	70-130	10.30.19 05.43		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH23A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-014	Date Collected: 10.24.19 12.50	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1260	5.05	mg/kg	10.28.19 16.58		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 21.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 21.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 21.03	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 21.03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 21.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	10.28.19 21.03	
o-Terphenyl	84-15-1	98	%	70-135	10.28.19 21.03	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH23A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-014	Date Collected: 10.24.19 12.50	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	10.30.19 06.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 06.03	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101		%	70-130	10.30.19 06.03	
1,4-Difluorobenzene	540-36-3	95		%	70-130	10.30.19 06.03	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH24	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-015	Date Collected: 10.24.19 13.10	Sample Depth: 1 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	384	4.96	mg/kg	10.28.19 17.03		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	10.28.19 21.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	10.28.19 21.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.28.19 21.22	U	1
Total GRO-DRO	PHC628	<49.9	49.9	mg/kg	10.28.19 21.22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.28.19 21.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	10.28.19 21.22	
o-Terphenyl	84-15-1	99	%	70-135	10.28.19 21.22	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH24	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-015	Date Collected: 10.24.19 13.10	Sample Depth: 1 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.30.19 06.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 06.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	10.30.19 06.23		
1,4-Difluorobenzene	540-36-3	99	%	70-130	10.30.19 06.23		



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH24A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-016	Date Collected: 10.24.19 13.20	Sample Depth: 2 ft
Analytical Method: Chloride by EPA 300		Prep Method: E300P
Tech: SPC		% Moisture:
Analyst: SPC	Date Prep: 10.28.19 13.20	Basis: Wet Weight
Seq Number: 3105654		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	319	5.02	mg/kg	10.28.19 17.08		1

Analytical Method: TPH by SW8015 Mod		Prep Method: SW8015P
Tech: DVM		% Moisture:
Analyst: ARM	Date Prep: 10.28.19 13.00	Basis: Wet Weight
Seq Number: 3105660		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	10.28.19 21.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	10.28.19 21.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.28.19 21.41	U	1
Total GRO-DRO	PHC628	<50.0	50.0	mg/kg	10.28.19 21.41	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.28.19 21.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	10.28.19 21.41	
o-Terphenyl	84-15-1	100	%	70-135	10.28.19 21.41	



Certificate of Analytical Results 641128

LT Environmental, Inc., Arvada, CO

PLU Delaware C

Sample Id: PH24A	Matrix: Soil	Date Received: 10.25.19 10.32
Lab Sample Id: 641128-016	Date Collected: 10.24.19 13.20	Sample Depth: 2 ft
Analytical Method: BTEX by EPA 8021B		Prep Method: SW5030B
Tech: KTL		% Moisture:
Analyst: KTL	Date Prep: 10.29.19 14.00	Basis: Wet Weight
Seq Number: 3105876		SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	10.30.19 06.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	10.30.19 06.43	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103		%	70-130	10.30.19 06.43	
1,4-Difluorobenzene	540-36-3	97		%	70-130	10.30.19 06.43	



LT Environmental, Inc.
PLU Delaware C

Analytical Method: Chloride by EPA 300

Seq Number: 3105644

MB Sample Id: 7688995-1-BLK

Matrix: Solid

LCS Sample Id: 7688995-1-BKS

Prep Method: E300P

Date Prep: 10.28.19

LCSD Sample Id: 7688995-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	243	97	245	98	90-110	1	20	mg/kg	10.28.19 12:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3105644

MB Sample Id: 7689018-1-BLK

Matrix: Solid

LCS Sample Id: 7689018-1-BKS

Prep Method: E300P

Date Prep: 10.28.19

LCSD Sample Id: 7689018-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	263	105	262	105	90-110	0	20	mg/kg	10.28.19 14:39	

Analytical Method: Chloride by EPA 300

Seq Number: 3105644

Parent Sample Id: 640979-091

Matrix: Soil

MS Sample Id: 640979-091 S

Prep Method: E300P

Date Prep: 10.28.19

MSD Sample Id: 640979-091 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.0	249	255	96	261	99	90-110	2	20	mg/kg	10.28.19 12:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3105644

Parent Sample Id: 641117-008

Matrix: Soil

MS Sample Id: 641117-008 S

Prep Method: E300P

Date Prep: 10.28.19

MSD Sample Id: 641117-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1140	199	1320	90	1330	95	90-110	1	20	mg/kg	10.28.19 13:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3105644

Parent Sample Id: 641128-007

Matrix: Soil

MS Sample Id: 641128-007 S

Prep Method: E300P

Date Prep: 10.28.19

MSD Sample Id: 641128-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	579	249	803	90	806	91	90-110	0	20	mg/kg	10.28.19 16:07	

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

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

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

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



LT Environmental, Inc.
PLU Delaware C

Analytical Method: Chloride by EPA 300

Seq Number: 3105654

Parent Sample Id: 641200-021

Matrix: Soil

MS Sample Id: 641200-021 S

Prep Method: E300P

Date Prep: 10.28.19

MSD Sample Id: 641200-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	218	250	479	104	471	101	90-110	2	20	mg/kg	10.28.19 14:55	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3105660

MB Sample Id: 7689072-1-BLK

Matrix: Solid

LCS Sample Id: 7689072-1-BKS

Prep Method: SW8015P

Date Prep: 10.28.19

LCSD Sample Id: 7689072-1-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	1130	113	1110	111	70-135	2	20	mg/kg	10.28.19 15:27	
Diesel Range Organics (DRO)	<15.0	1000	1080	108	1060	106	70-135	2	20	mg/kg	10.28.19 15:27	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		129		124		70-135	%	10.28.19 15:27
o-Terphenyl	105		115		111		70-135	%	10.28.19 15:27

Analytical Method: TPH by SW8015 Mod

Seq Number: 3105660

Matrix: Solid
MB Sample Id: 7689072-1-BLK

Prep Method: SW8015P

Date Prep: 10.28.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.28.19 15:08	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3105660

Parent Sample Id: 641128-001

Matrix: Soil

MS Sample Id: 641128-001 S

Prep Method: SW8015P

Date Prep: 10.28.19

MSD Sample Id: 641128-001 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	1030	103	1050	105	70-135	2	20	mg/kg	10.28.19 16:23	
Diesel Range Organics (DRO)	<15.0	999	986	99	1000	100	70-135	1	20	mg/kg	10.28.19 16:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		123		70-135	%	10.28.19 16:23
o-Terphenyl	105		104		70-135	%	10.28.19 16:23

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

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

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

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



LT Environmental, Inc.
PLU Delaware C

Analytical Method: BTEX by EPA 8021B

Seq Number: 3105876

MB Sample Id: 7689147-1-BLK

Matrix: Solid

LCS Sample Id: 7689147-1-BKS

Prep Method: SW5030B

Date Prep: 10.29.19

LCSD Sample Id: 7689147-1-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	0.112	112	70-130	8	35	mg/kg	10.29.19 21:23	
Toluene	<0.00200	0.100	0.0973	97	0.108	108	70-130	10	35	mg/kg	10.29.19 21:23	
Ethylbenzene	<0.00200	0.100	0.0992	99	0.112	112	70-130	12	35	mg/kg	10.29.19 21:23	
m,p-Xylenes	<0.00400	0.200	0.203	102	0.230	115	70-130	12	35	mg/kg	10.29.19 21:23	
o-Xylene	<0.00200	0.100	0.101	101	0.117	117	70-130	15	35	mg/kg	10.29.19 21:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	95		97		99		70-130	%	10.29.19 21:23
4-Bromofluorobenzene	98		104		115		70-130	%	10.29.19 21:23

Analytical Method: BTEX by EPA 8021B

Seq Number: 3105876

Parent Sample Id: 640977-001

Matrix: Soil

MS Sample Id: 640977-001 S

Prep Method: SW5030B

Date Prep: 10.29.19

MSD Sample Id: 640977-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0878	88	0.0893	90	70-130	2	35	mg/kg	10.29.19 22:03	
Toluene	<0.00200	0.100	0.0847	85	0.0852	86	70-130	1	35	mg/kg	10.29.19 22:03	
Ethylbenzene	<0.00200	0.100	0.0863	86	0.0860	87	70-130	0	35	mg/kg	10.29.19 22:03	
m,p-Xylenes	<0.00401	0.200	0.176	88	0.175	88	70-130	1	35	mg/kg	10.29.19 22:03	
o-Xylene	<0.00200	0.100	0.0881	88	0.0874	88	70-130	1	35	mg/kg	10.29.19 22:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		100		70-130	%	10.29.19 22:03
4-Bromofluorobenzene	111		108		70-130	%	10.29.19 22:03

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

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

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

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



Chain of Custody

Work Order No: 1041128

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

www.xenco.com Page 1 of 2

Project Manager: Dan Moir
 Company Name: LT Environmental, Inc., Permian office
 Address: 3300 North A Street
 City, State ZIP: Midland, TX 79705
 Phone: (432) 236-3849
 Email: slc@lternv.com, dmoir@lternv.com

Bill to: (if different) Kyle Littrell
 Company Name: XTO Energy
 Address: 3104 East Green Street
 City, State ZIP: Carlsbad, NM 88220

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

Project Name: 210 DeWane C
 Project Number: 011918038
 P.O. Number:
 Sampler's Name: Spencer Lo

Turn Around Routine
 Rush:
 Due Date:
 ANALYSIS REQUEST
 Work Order Notes

Temp Blank: Yes No
 Wet Ice: Yes No
 Thermometer ID: T-MU-007
 Received Intact: Yes No
 Cooler Custody Seals: Yes No N/A
 Sample Custody Seals: Yes No N/A
 Correction Factor: -0.2
 Total Containers: 14

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers		
					TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
PH17	S	10-24-19	1100	1	X	X	X
PH17A	S	10-24-19	1110	2	Y	X	Y
PH18	S	10-24-19	1125	1	Y	X	Y
PH18A	S	10-24-19	1130	2	X	X	Y
PH19	S	10-24-19	1135	1	X	X	Y
PH19A	S	10-24-19	1140	2	X	X	X
PH20	S	10-24-19	1150	1	X	X	X
PH20A	S	10-24-19	1155	2	X	X	X
PH21	S	10-24-19	1210	1	Y	X	X
PH21A	S	10-24-19	1215	2	X	X	X

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 sale. 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.

Signature: [Signature] Date: 10/25/19 09:55 AM

Signature: [Signature] Date: 10/25/19 10:30

Relinquished by: (Signature) Received by: (Signature)

Date/Time: 10/25/19 09:55 AM

Date/Time: 10/25/19 10:30



Inter-Office Shipment

IOS Number 50900

Date/Time: 10/25/19 15:50

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776821232900

F-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641128-001	S	PH17	10/24/19 11:00	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-001	S	PH17	10/24/19 11:00	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-001	S	PH17	10/24/19 11:00	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-002	S	PH17A	10/24/19 11:10	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-002	S	PH17A	10/24/19 11:10	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-002	S	PH17A	10/24/19 11:10	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-003	S	PH18	10/24/19 11:25	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-003	S	PH18	10/24/19 11:25	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-003	S	PH18	10/24/19 11:25	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-004	S	PH18A	10/24/19 11:30	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-004	S	PH18A	10/24/19 11:30	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-004	S	PH18A	10/24/19 11:30	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-005	S	PH19	10/24/19 11:35	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-005	S	PH19	10/24/19 11:35	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-005	S	PH19	10/24/19 11:35	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-006	S	PH19A	10/24/19 11:40	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-006	S	PH19A	10/24/19 11:40	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-006	S	PH19A	10/24/19 11:40	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-007	S	PH20	10/24/19 11:50	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-007	S	PH20	10/24/19 11:50	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-007	S	PH20	10/24/19 11:50	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-008	S	PH20A	10/24/19 11:55	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-008	S	PH20A	10/24/19 11:55	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-008	S	PH20A	10/24/19 11:55	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-009	S	PH21	10/24/19 12:10	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	



Inter-Office Shipment

IOS Number 50900

Date/Time: 10/25/19 15:50

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776821232900

F-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
641128-009	S	PH21	10/24/19 12:10	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-009	S	PH21	10/24/19 12:10	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-010	S	PH21A	10/24/19 12:15	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-010	S	PH21A	10/24/19 12:15	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-010	S	PH21A	10/24/19 12:15	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-011	S	PH22	10/24/19 12:25	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-011	S	PH22	10/24/19 12:25	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-011	S	PH22	10/24/19 12:25	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-012	S	PH22A	10/24/19 12:35	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-012	S	PH22A	10/24/19 12:35	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-012	S	PH22A	10/24/19 12:35	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-013	S	PH23	10/24/19 12:45	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-013	S	PH23	10/24/19 12:45	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-013	S	PH23	10/24/19 12:45	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-014	S	PH23A	10/24/19 12:50	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-014	S	PH23A	10/24/19 12:50	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-014	S	PH23A	10/24/19 12:50	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-015	S	PH24	10/24/19 13:10	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	
641128-015	S	PH24	10/24/19 13:10	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-015	S	PH24	10/24/19 13:10	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-016	S	PH24A	10/24/19 13:20	SW8015MOD_NM	TPH by SW8015 Mod	10/31/19	11/07/19	JKR	GRO-DRO PHCC10C28 PF	
641128-016	S	PH24A	10/24/19 13:20	SW8021B	BTEX by EPA 8021B	10/31/19	11/07/19	JKR	BR4FBZ BZ BZME EBZ X	
641128-016	S	PH24A	10/24/19 13:20	E300_CL	Chloride by EPA 300	10/31/19	04/21/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Released to Imaging: 10/18/2022 11:59:20 AM

Received By:



Inter-Office Shipment

IOS Number 50900

Date/Time: 10/25/19 15:50

Created by: Elizabeth McClellan

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.: 776821232900

F-Mail: jessica.kramer@xenco.com

Inter Office Shipment or Sample Comments:

Date Relinquished:

Elizabeth McClellan

10/25/2019

Date Received:

Cooler Temperature:

Brianna Teel

10/28/2019 07:26

0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 50900

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/25/2019 03:50 PM

Received By: Brianna Teel

Date Received: 10/28/2019 07:26 AM

Sample Receipt Checklist

Comments

- #1 *Temperature of cooler(s)? .4
- #2 *Shipping container in good condition? Yes
- #3 *Samples received with appropriate temperature? Yes
- #4 *Custody Seals intact on shipping container/ cooler? Yes
- #5 *Custody Seals Signed and dated for Containers/coolers Yes
- #6 *IOS present? Yes
- #7 Any missing/extra samples? Yes
- #8 IOS agrees with sample label(s)/matrix? No
- #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: 10/28/2019



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 10/25/2019 10:32:00 AM

Work Order #: 641128

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)?	Yes	Subbed to 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: 10/25/2019

Checklist reviewed by:

Jessica Kramer

Date: 10/28/2019

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 5010

CONDITIONS

Operator: XTO ENERGY, INC 6401 Holiday Hill Road Midland, TX 79707	OGRID: 5380
	Action Number: 5010
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
jharimon	Depth to groundwater is not adequately identified. When nearby wells are used to determine depth to groundwater, the wells should be no further than ½ mile away from the site, and data should be no more than 25 years old, and well construction information should be provided. If evidence of depth to ground water within a ½ mile radius of the site cannot be provided, impacted soils will need to meet Table 1 Closure Criteria for ground water at a depth of 50 feet or less. This release does appear to have been vertically and horizontally defined to 4' and does appear to meet the strictest remediation requirements in Table 1 19.15.29.12 NMAC.	10/18/2022