



LT Environmental, Inc.

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Midland, Texas 79705
432.704.5178

September 13, 2018

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210**RE: Closure Request
Poker Lake Unit 320H
Remediation Permit Number 2RP-2888, 2RP-3563, 2RP-3769, and 2RP-3788
Eddy County, New Mexico**

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), is pleased to present the following letter report detailing the soil sampling and excavation activities at the Poker Lake Unit (PLU) 320H well pad (Site) in Unit Letter N, Section 4, Township 24 South, Range 30 East, in Eddy County, New Mexico (Figure 1). The purpose of the soil sampling and excavation activities was to address impacts to soil after four separate events caused the release of crude oil and produced water onto the well pad and surrounding pasture.

On March 11, 2015 a release of crude oil from the flare stack was discovered. At the time of discovery, the cause of the release was unknown. Approximately 20 barrels (bbls) of crude oil were released. The spill impacted approximately 3,660 square feet of pasture and pipeline right-of-way and also misted an area of approximately 15,600 square feet. The former operator reported the release to the New Mexico Oil Conservation Division (NMOCD) on a Release Notification and Corrective Action Form C-141 on March 16, 2015 and was assigned Remediation Permit Number (RP) 2RP-2888 (Attachment 1).

On February 19, 2016 fluid over accumulated in the production vessels causing fluid to release out of the flare stack. Approximately 11 bbls of crude oil and 10 bbls of produced water were released onto the pasture area north and northwest of the flare stack. An environmental response crew was dispatched to the location to scrape up the saturated soil and apply Micro-blaze to the affected vegetation. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on February 23, 2016 and was assigned RP Number 2RP-3563 (Attachment 1).

On July 6, 2016 a gasket failed on the production heater-treater causing approximately 111 bbls of crude oil and 35 bbls of produced water to release onto the well pad. The majority of the fluid remained within the earthen containment berm with the exception of a light spray to the pad. Free-standing liquid was recovered with a vacuum truck; approximately 80 bbls of crude oil and 15 bbls of produced water were recovered. A response crew was dispatched to the location to





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conduct an initial scrape of the well pad. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on July 7, 2016 and was assigned RP Number 2RP-3769 (Attachment 1).

On July 14, 2016 the produced water tanks ran over, filling and overflowing the containment. The battery experienced a power failure and the SCADA alarms failed to communicate the upset conditions. Approximately 1,711 bbls of produced water were released within the lined containment and onto the surface of the well pad. Approximately 1,300 bbls of produced water were contained within the lined containment. Free-standing liquid was recovered with a vacuum truck; approximately 1,560 bbls of produced water were recovered from the lined containment and ground surface. An initial response crew was dispatched to the location to scrape up saturated surface soil. The former operator reported the release to the NMOCD on a Release Notification and Corrective Action Form C-141 on July 19, 2016 and was assigned RP Number 2RP-3788 (Attachment 1).

Although 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 four historical releases described above occurred at the same production facility, the sampling and excavation activities were completed to address and close all four releases simultaneously. Based on the results of the confirmation soil sampling events, XTO is requesting no further action for these release events.

BACKGROUND

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 and known aquifer properties. The nearest permitted water well is C 02095, located approximately 1.45 miles northeast of the location, with a depth to groundwater of 440 feet bgs and a total depth of 554 feet bgs. The Site is greater than 1,000 feet from a water source and greater than 200 feet from a private domestic water source. The closest surface water to the Site is unnamed dry arroyo, located approximately 1.44 miles northwest of the Site. Based on these criteria, the NMOCD site ranking for remediation action levels, according to the NMOCD's 1993 *Guidelines for Leaks, Spills, and Releases* is 0, and the following remediation action levels applied: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region, LTE applied a site-specific chloride action level of 600 mg/kg or within 10 percent (%) of the background concentrations.

SOIL SAMPLING

On March 6, 2018, an LTE scientist collected ten preliminary soil samples to assess the lateral extent of impacted soil. To eliminate the effects from weathering and natural degradation of





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contaminants at the ground surface, the soil samples were collected from each sample location at approximately 0.5 feet bgs. The soil sample locations were selected based on information provided on the initial Form C-141s and field observations. Five soil samples (SS1 through SS5) were collected to assess the lateral extent of soil impact associated with release 2RP-3769 (Figure 2). Five soil samples (SS1 through SS5) were collected to assess the lateral extent of soil impact associated with release 2RP-3788 (Figure 3). The flare stack releases associated with release numbers 2RP-2888 and 2RP-3563 were not addressed during the March 2018 sampling event.

On June 26, 2018, an LTE scientist collected ten preliminary soil samples to assess the lateral and vertical extent of impacted soil associated with the flare stack releases 2RP-2888 and 2RP-3563 (Figure 4). Six preliminary soil samples (SS1 through SS6) were collected from a depth of 0.5 feet bgs. Six additional soil samples (SS1A through SS6A) were collected from the same sample points from a depth of 2 feet bgs (Figure 4). The impacted surface soil in the release area had been previously scraped, as indicated on the initial Form C-141.

The soil samples were screened for volatile aromatic hydrocarbons using a photo-ionization detector (PID) equipped with a 10.6 electron volt lamp in accordance with the NMOCD *Guidelines for Remediation of Leaks, Spills and Releases*, August 13, 1993. The soil samples were placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, and method of analysis, and immediately placed on ice. The samples were shipped to Xenco Laboratories in Midland, Texas, at 4 degrees Celsius (°C) under strict chain-of-custody procedures for analysis of BTEX by United States Environmental Protection Agency (EPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by EPA Method 8015 Modified, and chloride by EPA Method 300.

Laboratory analytical results for the preliminary soil samples associated with release 2RP-3769 indicated three soil samples (SS1, SS3, SS4) exceeded the NMOCD site-specific remediation action level for TPH and one soil sample (SS5) exceeded the NMOCD site-specific remediation action level for TPH and chloride. The laboratory analytical results are depicted on Figure 2 and summarized in Table 1.

Laboratory analytical results for the preliminary soil samples associated with release 2RP-3788 indicated two soil samples (SS1 and SS2) exceeded the NMOCD site-specific remediation action level for TPH and chloride and two soil samples (SS3 and SS4) exceeded the NMOCD site-specific remediation action level for chloride. The laboratory analytical results are depicted on Figure 3 and summarized in Table 2.

Laboratory analytical results for the preliminary soil samples associated with release 2RP-2888 and 2RP-3563 indicated that all soil samples submitted for laboratory analysis (SS1 through SS3, SS5, SS6, SS1A through SS3A, SS5A and SS6A) were compliant with NMOCD site-specific remediation action levels for BTEX, TPH, and chloride. Soil samples SS4 and SS4A, collected at 0.5 feet bgs and 2 feet bgs, respectively, were not submitted for laboratory analysis based on





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elevated field screening results. Excavation was required in the location of these samples. The laboratory analytical results are depicted on Figure 4 and summarized in Table 3. The laboratory analytical reports are included in Attachment 2.

Based on field screening, visual observations, and soil sample laboratory analytical results, excavation of impacted soil was required in the release areas associated with all four releases.

EXCAVATION ACTIVITIES

During June 2018, LTE personnel returned to the Site to oversee excavation of impacted soil as indicated by visual staining, field screening, and laboratory analytical results exceeding the NMOCD remediation action levels for TPH and chloride. Excavation activities commenced on June 21, 2018, and concluded on July 2, 2018. In an effort to delineate hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil samples using a photo-ionization detector (PID) and Hach® chloride QuanTab® test strips.

Excavation activities associated with release 2RP-3769 were completed in the areas around preliminary soil samples SS1, SS3, SS4, and SS5 and in the areas where LTE observed surficial soil staining within the process equipment berm and on the west side of the process equipment berm. The excavation was completed to a depth ranging from 3 feet bgs to 6 feet bgs. The final excavation measured approximately 3,100 square feet. Approximately 750 cubic yards of soil were removed from the excavation. Upon completion of excavation activities, LTE collected confirmation soil samples FS1 through FS4 from the floor of the excavation and soil samples SW1 through SW17 from the sidewalls of the excavation. The final excavation extent and soil sample locations and are illustrated on Figure 2.

Excavation activities associated with release 2RP-3788 were completed in the areas around preliminary samples SS1 through SS4 and in the areas where LTE observed surficial soil staining west of the storage tank containment berm. The excavation was completed to a depth of 2 feet bgs. The final excavation measured approximately 15,750 square feet. Approximately 1,021 cubic yards of soil were removed from the excavation. Upon completion of excavation activities LTE collected confirmation soil samples SS1A through SS4A and SS6 through SS15 from the final lateral and vertical extents of the excavation. The final excavation extent and soil sample locations and are illustrated on Figure 3.

Excavation activities associated with the flare stack releases 2RP-2888 and 2RP-3563 were completed northwest of the flare stack as indicated by field screening results in the location of soil samples SS4 and SS4A. The excavation was completed to a depth of 3 feet bgs. The final excavation measured approximately 16 square feet. Approximately 2 cubic yards of soil were removed from the excavation. Upon completion of excavation activities, LTE collected confirmation soil sample FS1 from the floor of the excavation and soil samples SW1 through SW4 from the sidewalls of the excavation. While onsite for excavation activities, LTE collected three





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additional confirmation surface soil samples (SS16 through SS18) in order to confirm the extent of the release. The preliminary soil samples (SS1 through SS3, SS5, and SS6 from 0.5 feet bgs, and SS1A through SS3A, SS5A, and SS6A from 2 feet bgs) collected within the release footprint successfully defined the lateral and vertical extent of the release and confirmed that no further excavation was required. The final excavation extent and soil sample locations are illustrated on Figure 4.

The confirmation soil samples from all excavations were collected and handled as previously described and submitted to Xenco Laboratories in Midland, Texas. The impacted soil removed from all excavations was transported and properly disposed of at the Lea Land Landfill and the R360 Landfill located in Eunice, New Mexico, and Hobbs, New Mexico, respectively.

ANALYTICAL RESULTS

Laboratory analytical results associated with release 2RP-3769 indicated preliminary soil samples SS1, SS3, SS4, and SS5 exceeded NMOCD remediation action levels. Impacted soil was excavated from the release area and subsequent excavation floor soil samples FS1 through FS4 and excavation sidewall soil samples SW1 through SW17 were collected from the final excavation extent. Laboratory analytical results indicated that soil samples FS1 through FS4, SW1 through SW6, SW8, SW9, and SW13 through SW17 were compliant with NMOCD remediation action levels. Laboratory analytical results indicated that soil samples SW7, SW10, SW11, and SW12 exceeded the NMOCD remediation action level for chloride. XTO's safety policy restricts soil disturbing activities to a 2-foot radius of any onsite storage tanks or process equipment. This safety policy is established to protect workers and to reduce the likelihood of compromising the foundation of the process equipment and storage tanks. This policy had to be enforced along the eastern sidewall of the excavation where impacted soil was observed within two feet of the process equipment. The excavation was advanced to two feet from the process equipment by mechanical and hand digging methods to remove as much impacted soil as possible. Laboratory analytical results for soil samples SS1, SS5, SW7, SW10, SW11, and SW12 indicate that soil exceeding NMOCD remediation action levels was left in-place. Soil samples SW13 and SW08 collected along the eastern sidewall of the excavation north and south of the impacted samples, delineate the extent of impacted soil that was left in-place. LTE estimates that approximately 30 cubic yards of impacted soil remain in-place between soil samples SW13 and SW08 under the process equipment within the bermed area.

Laboratory analytical results associated with release 2RP-3788 indicated preliminary soil samples SS1 through SS4 exceeded NMOCD remediation action levels. Impacted soil was excavated from the release area and subsequent soil samples SS1A through SS4A and SS6 through SS15 were collected from the final excavation extent. Laboratory analytical results indicated that all final confirmation soil samples were compliant with NMOCD remediation action levels for BTEX, TPH, and chloride.



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Laboratory analytical results associated with flare stack releases 2RP-2888 and 2RP-3562 indicated soil samples SS1 through SS3, SS5, SS6, SS1A through SS3A, SS5A, SS6A, and SS16 through SS18 were compliant with NMOCD remediation action levels. Impacted soil was excavated from the release area around soil samples SS4/SS4A based on elevated field screening results. Subsequent soil samples FS1, and SW1 through SW4 were collected from the final excavation extent. Laboratory analytical results indicated that all final confirmation soil samples were compliant with NMOCD remediation action levels for BTEX, TPH, and chloride. Laboratory analytical results are presented on Figures 2 through 4 and summarized in Tables 1 through 3, and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

Laboratory analytical results for the final confirmation surface soil samples and final excavation soil samples indicate that BTEX, TPH, and chloride concentrations are compliant with NMOCD site-specific remediation action levels, with the exception of sidewall samples SW7, and SW10 through SW12 associated with release 2RP-3769. An estimated 30 cubic yards of impacted soil was left in-place within 3 feet of the process equipment per XTO's safety policy as described above. The remaining impacted soil will be addressed when the site is closed or reconfigured to allow for remediation to be completed.

Initial response efforts, natural degradation, and excavation of impacted soil have mitigated impacts at this Site. XTO requests no further action for release numbers 2RP-3769, 2RP-3788, 2RP-2888, and 2RP-3563. Upon approval of this request, XTO will backfill and recontour the excavations. 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 Adrian Baker at (432) 887-1255 or abaker@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads 'Adrian Baker'.

Adrian Baker
Project Geologist

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

Ashley L. Ager, P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Maria Pruett, NMOCD
Jim Amos, BLM
Shelly Tucker, BLM





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Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations (2RP-3769)
Figure 3	Soil Sample Locations (2RP-3788)
Figure 4	Soil Sample Locations (2RP-2888 and 2RP-3563)
Table 1	Soil Analytical Results (2RP-3769)
Table 2	Soil Analytical Results (2RP-3788)
Table 3	Soil Analytical Results (2RP-2888 and 2RP-3563)

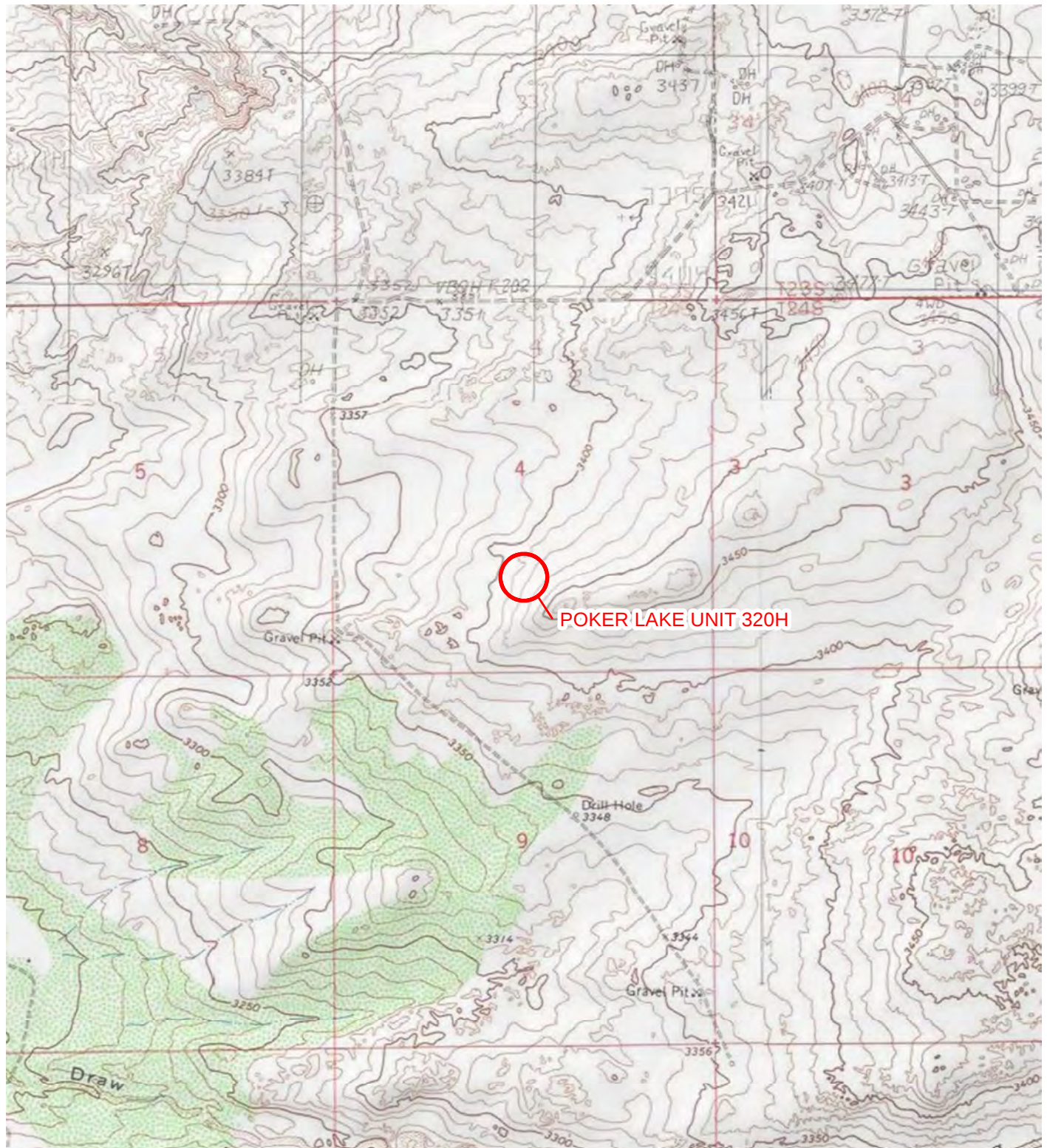
Attachment 1 Initial/Final NMOC Form C-141 (2RP-2888, 2RP-3563, 2RP-3769, and 2RP-3788)

Attachment 2 Laboratory Analytical Reports



FIGURES



**LEGEND**

○ SITE LOCATION

IMAGE COURTESY OF ESRI/USGS

0 2,000 4,000
Feet

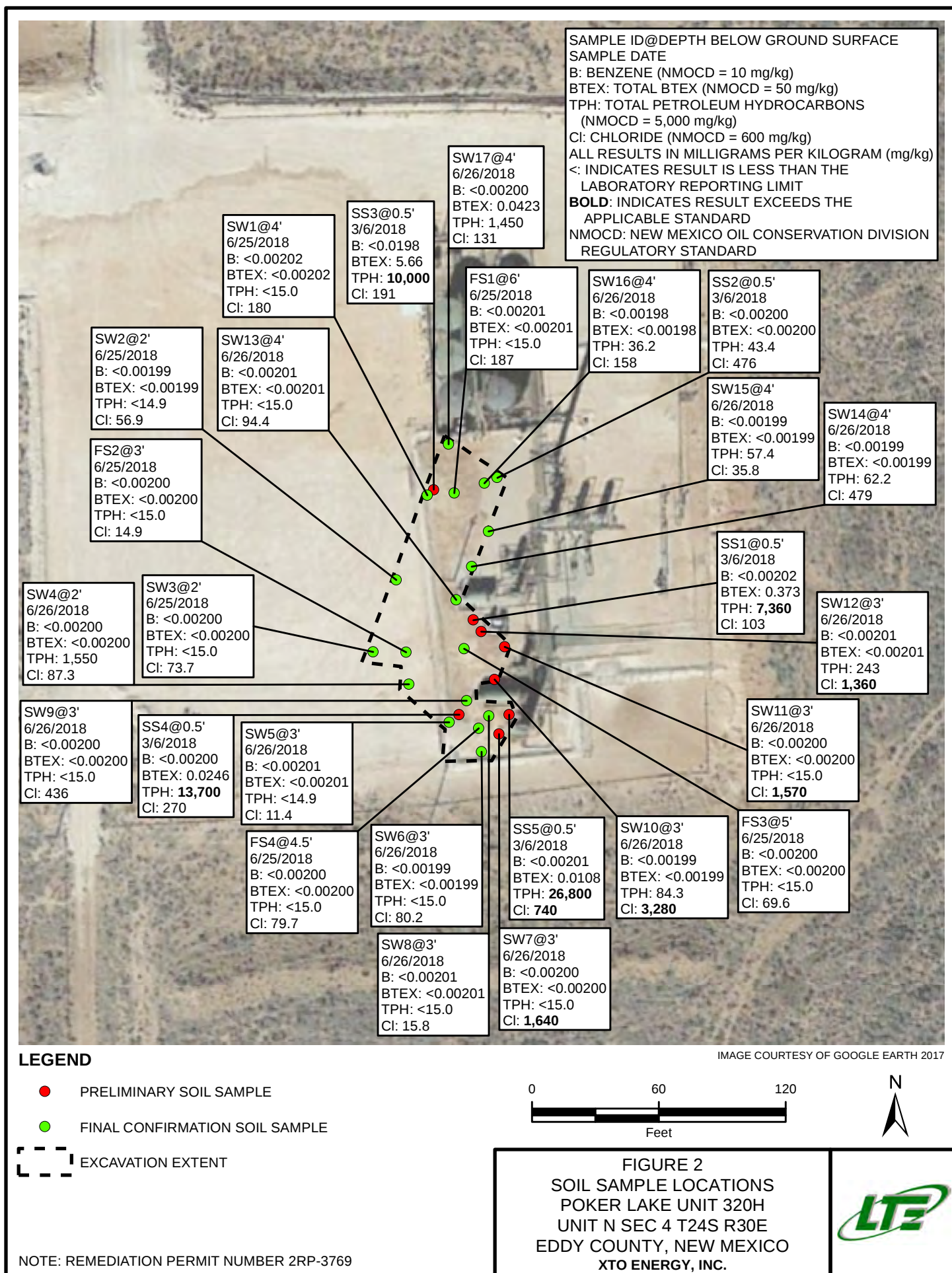


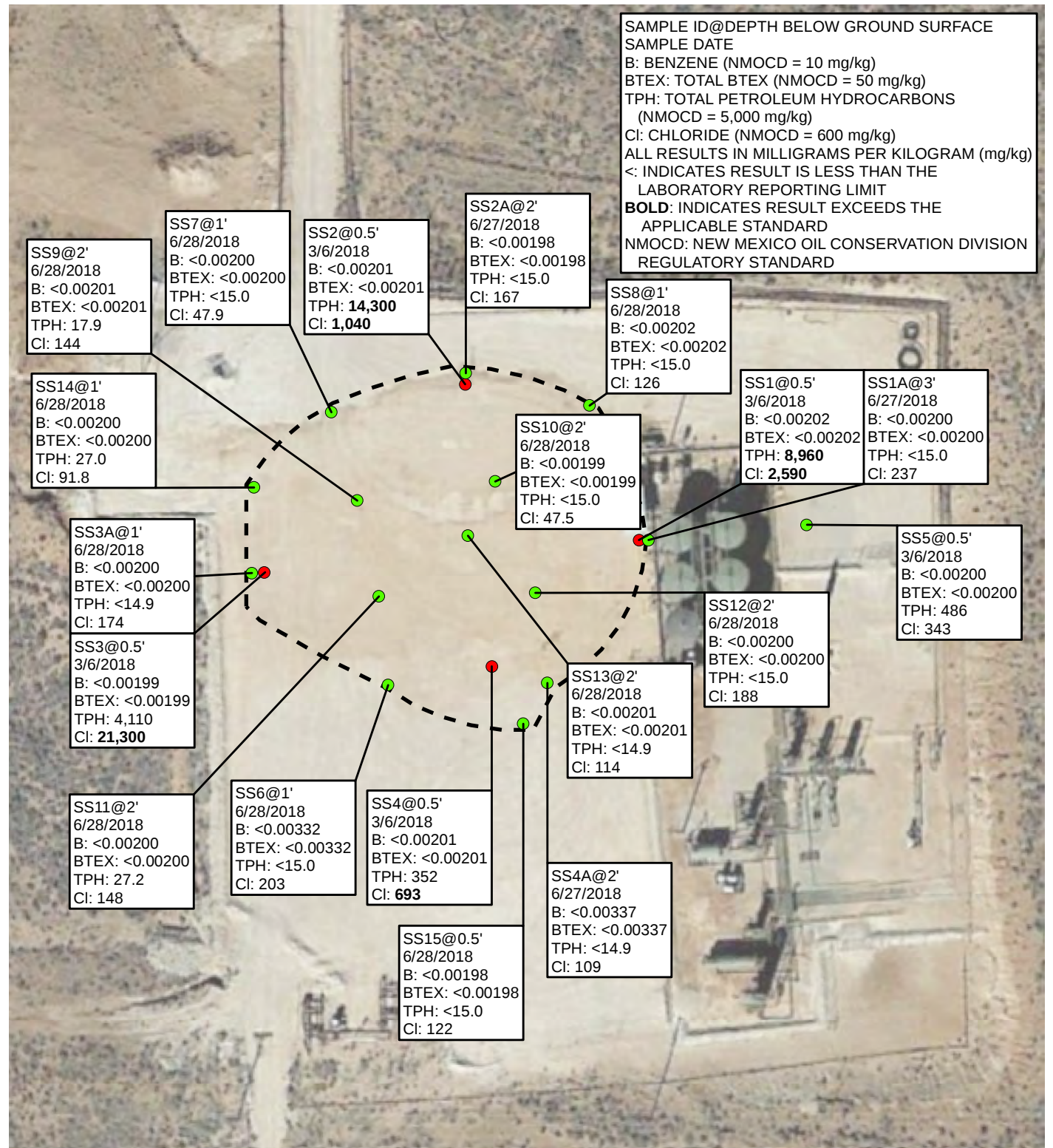
NOTE: REMEDIATION PERMIT NUMBERS
2RP-2888, 2RP-3563, 2RP-3769, & 2RP-3788

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 320H
UNIT N SEC 4 T24S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.



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**LEGEND**

- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE

--- EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

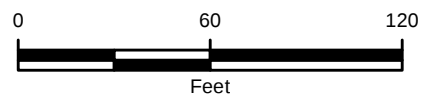
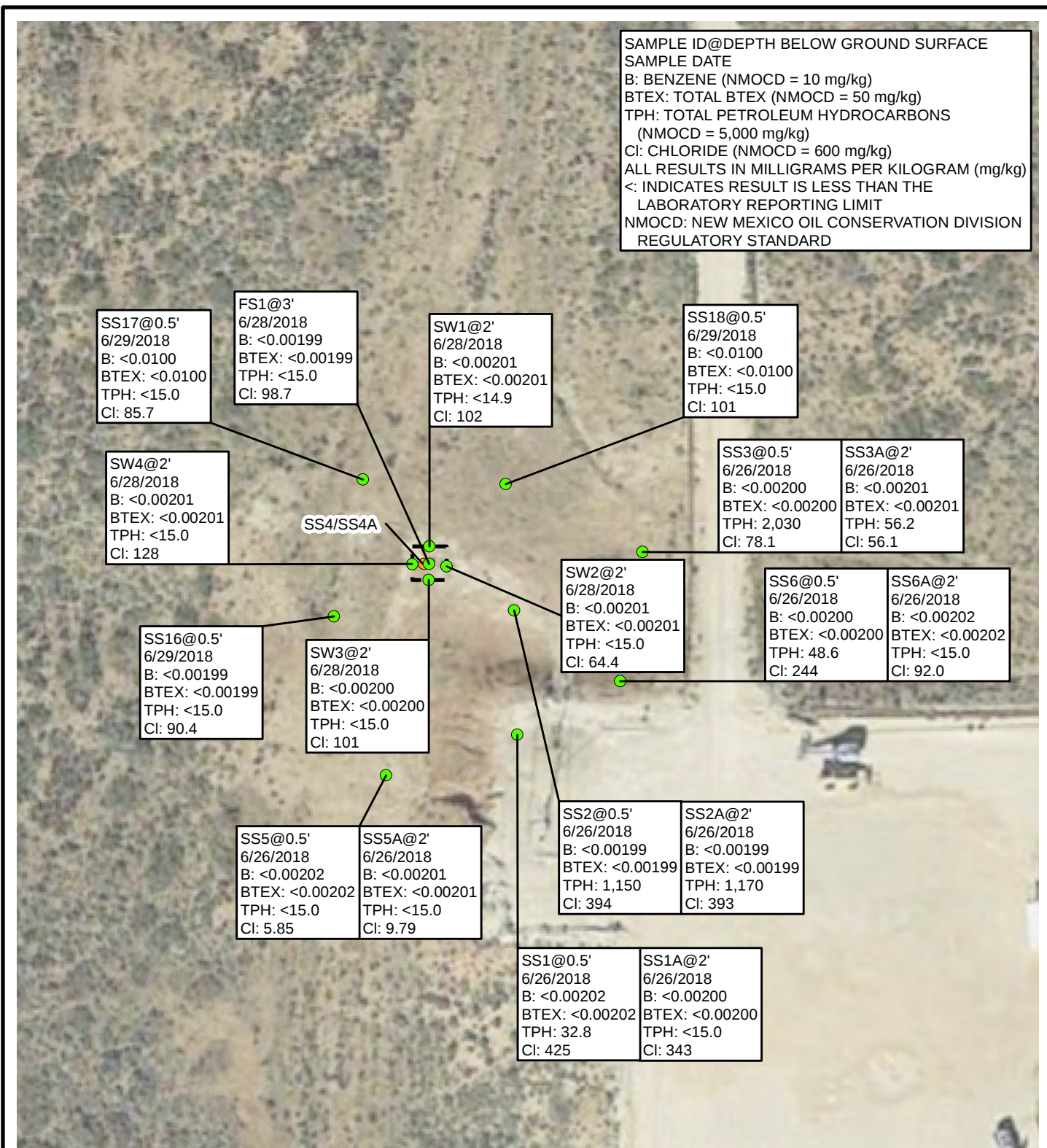


FIGURE 3
 SOIL SAMPLE LOCATIONS
 POKER LAKE UNIT 320H
 UNIT N SEC 4 T24S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBER 2RP-3788

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**LEGEND**

- FINAL CONFIRMATION SOIL SAMPLE
- FIELD SCREENED SOIL SAMPLE

--- EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

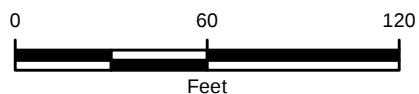


FIGURE 4
SOIL SAMPLE LOCATIONS
 POKER LAKE UNIT 320H
 UNIT N SEC 4 T24S R30E
 EDDY COUNTY, NEW MEXICO
 XTO ENERGY, INC.



NOTE: REMEDIATION PERMIT NUMBERS 2RP-2888 & 2RP-3563

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TABLES



TABLE 1
SOIL ANALYTICAL RESULTS
POKER LAKE UNIT 320H
REMEDATION PERMIT NUMBER 2RP-3769
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)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	3/6/2018	<0.00202	0.237	0.0291	0.107	0.373	642	5,880	841	7,360	103
SS2	0.5	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	43.4	<15.0	43.4	476
SS3	0.5	3/6/2018	<0.0198	0.436	1.06	4.16	5.66	2,440	6,650	951	10,000	191
SS4	0.5	3/6/2018	<0.00200	<0.00200	<0.00200	0.0246	0.0246	<150	10,900	2,780	13,700	270
SS5	0.5	3/6/2018	<0.00201	<0.00201	0.00395	0.00681	0.0108	<150	21,200	5,630	26,800	740
FS1	6	6/25/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	187
FS2	3	6/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	14.9
FS3	5	6/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	69.6
FS4	4.5	6/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	79.7
SW1	4	6/25/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	180
SW2	2	6/25/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	<14.9	<14.9	<14.9	56.9
SW3	2	6/25/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	73.7
SW4	2	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1,520	34.7	1,550	87.3
SW5	3	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	11.4
SW6	3	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	80.2
SW7	3	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	1,640
SW8	3	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	15.8
SW9	3	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	436
SW10	3	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	84.3	<15.0	84.3	3,280
SW11	3	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	1,570
SW12	3	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	226	16.8	243	1,360
SW13	4	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	94.4
SW14	4	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	62.2	<15.0	62.2	479
SW15	4	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<14.9	57.4	<14.9	57.4	35.8
SW16	4	6/26/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	36.2	<15.0	36.2	158
SW17	4	6/26/2018	<0.00200	<0.00200	0.00835	0.0339	0.0423	19.0	1,390	45.9	1,450	131
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	5,000	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold indicates result exceeds the applicable regulatory standard.

TABLE 2
SOIL ANALYTICAL RESULTS
POKER LAKE UNIT 320H
REMEDATION PERMIT NUMBER 2RP-3788
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)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	3/6/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<74.9	7,250	1,710	8,960	2,590
SS2	0.5	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<74.9	11,600	2,710	14,300	1,040
SS3	0.5	3/6/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<74.9	3,570	544	4,110	21,300
SS4	0.5	3/6/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	255	96.6	352	693
SS5	0.5	3/6/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	381	105	486	343
SS1A	3	6/27/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	237
SS2A	2	6/27/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	167
SS3A	1	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	174
SS4A	2	6/27/2018	<0.00337	<0.00337	<0.00337	<0.00337	<0.00337	<14.9	<14.9	<14.9	<14.9	109
SS6	1	6/28/2018	<0.00332	<0.00332	<0.00332	<0.00332	<0.00332	<15.0	<15.0	<15.0	<15.0	203
SS7	1	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	47.9
SS8	1	6/28/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	126
SS9	2	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	17.9	<15.0	17.9	144
SS10	2	6/28/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	47.5
SS11	2	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	27.2	<15.0	27.2	148
SS12	2	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	188
SS13	2	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	114
SS14	1	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	27.0	<15.0	27.0	91.8
SS15	0.5	6/28/2018	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<15.0	<15.0	<15.0	<15.0	122
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	5,000	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold indicates result exceeds the applicable regulatory standard.

TABLE 3
SOIL ANALYTICAL RESULTS
POKER LAKE UNIT 320H
REMEDIATION PERMIT NUMBERS 2RP-2888 and 2RP-3563
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)	C6-C10 Gasoline Range Organics (mg/kg)	C10-C28 Diesel Range Organics (mg/kg)	C28-C40 Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS1	0.5	6/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	32.8	<15.0	32.8	425
SS2	0.5	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	1,100	45.5	1,150	394
SS3	0.5	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	2,000	30.1	2,030	78.1
SS5	0.5	6/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	5.85
SS6	0.5	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	48.6	<15.0	48.6	244
SS1A	2	6/26/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	343
SS2A	2	6/26/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	1,130	37.8	1,170	393
SS3A	2	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	56.2	<14.9	56.2	56.1
SS5A	2	6/26/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	9.79
SS6A	2	6/26/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	92.0
FS1	3	6/28/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	98.7
SW1	2	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	102
SW2	2	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	64.4
SW3	2	6/28/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	101
SW4	2	6/28/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	128
SS16	0.5	6/29/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	90.4
SS17	0.5	6/29/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	<15.0	<15.0	<15.0	85.7
SS18	0.5	6/29/2018	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<15.0	<15.0	<15.0	<15.0	101
NMOCD Remediation Action Levels			10	NE	NE	NE	50	NE	NE	NE	5,000	600

Notes:

bgs - below ground surface

BTEX - benzene, toluene, ethylbenzene, and total xylenes

mg/kg - milligrams per kilogram

NE - not established

NMOCD - New Mexico Oil Conservation Division

TPH - total petroleum hydrocarbons

< - indicates result is below laboratory reporting limits

Bold indicates result exceeds the applicable regulatory standard.

ATTACHMENT 1: INITIAL/FINAL NIMOD FORM C-141 (2RP-2888, 2RP-3563, 2RP-3769, and 2RP-3788)



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

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141
Revised August 8, 2011

MAR 16 2015
Submit Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1507554274 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 2160737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-320 Tank Battery	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-39810	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	4	24S	30E					Eddy

Latitude N 32.243554 Longitude W 103.886910

NATURE OF RELEASE

Type of Release: Crude oil	Volume of Release: 20 bbls.	Volume Recovered: None
Source of Release: Flare Stack	Date and Hour of Occurrence: Date and time unknown	Date and Hour of Discovery: 3/11/15 at 2:30 p.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required.	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour: 3/12/15 at 8:30 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.*

Crude oil was released out the flare stack. Cause not known at the time of discovery.

Describe Area Affected and Cleanup Action Taken.*

The release flow path and ponded areas measured approximately 3,660 sq.ft. of pasture and pipeline right of ways. It also misted an area of approximately 15,600 sq.ft. There are two buried pipelines under the flow path and ponded areas. The stained area was left as is pending the final 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.

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: 3/16/15	Expiration Date:
E-mail Address: tasavoie@basspet.com	Conditions of Approval:	Attached ☐
Date: 3/17/15 Phone: 432-556-8730	Remediation per O.C.D. Rules & Guidelines	

* Attach Additional Sheets If Necessary

SUBMIT REMEDIATION PROPOSAL NO
LATER THAN: 4/16/15

2RP.2888

ARTESIA DISTRICT

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

FEB 23 2016

Form C-141
Revised August 8, 2011

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

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

RECEIVED

Release Notification and Corrective Action

NAB1605654091 **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 2160737	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU 320H	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 3001539810
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	4	24S	30E	2590		1670		Eddy

Latitude: 32.24361 Longitude: 103.88657

NATURE OF RELEASE

Type of Release: Crude oil and Produced water	Volume of Release: 11 barrels oil and 10 barrels PW	Volume Recovered: None
Source of Release: Flare Stack	Date and Hour of Occurrence: 2-19-16 @ 11:30am	Date and Hour of Discovery: 2-19-16 @ 11:55am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos	
By Whom? Bradley Blevins	Date and Hour: 2-19-16 @ 12:32pm	
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.*

Fluid over ranged production vessels causing fluid to be released out the flare stack. An environmental response crew was dispatched to the location and began to scrape up the saturated soils; micro blaze was also applied to the vegetation.

Describe Area Affected and Cleanup Action Taken.*

The fluid released affected the pasture to the north/northwest of the flare area. An environmental response crew was dispatched to the location and began to scrape up the saturated soils near the flare; micro blaze was also applied to the vegetation within the spray area. The area will be sampled and discussed with the NMOCD and BLM.

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: <u>Bradley Blevins</u>	OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins	Signed By <u>Mike Bratcher</u> Approved by Environmental Specialist:	
Title: Assistant Remediation Foreman	Approval Date: <u>2/25/16</u>	Expiration Date: <u>N/A</u>
E-mail Address: bblevins@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines	
Date: <u>2-23-16</u> Phone: 432-214-3704	Attached ☐ SUBMIT REMEDIATION PROPOSAL NO	

* Attach Additional Sheets If Necessary

LATER THAN: 3/20/16

2RP-3563

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

ARTESIA DISTRICT

JUL 07 2016

Form C-141
Revised August 8, 2011Submit 1 Copy to appropriate District Office in
conformance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB1619044689 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. <u>260737</u>	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU 320 Battery	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-39810	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	4	24S	30E	2590		1670		Eddy

Latitude: 32.242954 Longitude: 103.885796

NATURE OF RELEASE

Type of Release: Crude Oil/ Produced Water	Volume of Release: 111 barrels oil and 35 barrels Produced Water	Volume Recovered: 80 Barrels Oil and 15 Barrels Produced Water
Source of Release: Heater Treater Gasket	Date and Hour of Occurrence: 7-6-16 @ 8:00am	Date and Hour of Discovery: 7-6-16 @ 8:45am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher OCD, Heather Patterson OCD, Shelly Tucker BLM	
By Whom? Bradley Blevins	Date and Hour: 7-6-16 @ 11:13am email	
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.*

BOPCO EHS was notified of a release that occurred when the gasket failed on the production heater treater. Majority of the fluid was contained within an earth berm with the exception of a light spray to the location. A vacuum truck was called to the location to recover the standing fluid. A response crew was sent to the location to conduct an initial scrape of the well pad.

Describe Area Affected and Cleanup Action Taken.*

Majority of the affected area was within the earth berm that surrounds the production equipment; the standing fluid was recovered by a vacuum truck. A light spray to the location was observed; an initial response crew conducted a scrape of the well pad.

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: <u>Bradley Blevins</u>		OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins		Signed By: <u>Mike Bratcher</u> Approved by Environmental Specialist:	
Title: Assistant Remediation Foreman		Approval Date: <u>7/8/16</u>	Expiration Date: <u>NIA</u>
E-mail Address: bblevins@basspet.com		Conditions of Approval: Remediation per O.C.D. Rules & Guidelines ☐	
Date: <u>7-7-16</u>	Phone: 432-214-3704	SUBMIT REMEDIATION PROPOSAL NO LATER THAN: <u>7/8/16</u>	

ARP-3769

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

NM OIL CONSERVATION

ARTESIA DISTRICT

JUL 19 2016

Form C-141
Revised August 8, 2011Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

NAB102D44442 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Bradley Blevins
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU 320H	Facility Type: Exploration and Production
Surface Owner: Federal	Mineral Owner: Federal
API No. 30-015-39810	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	4	24S	30E	2590		1670		Eddy

Latitude: 32.243083 Longitude: 103.886519

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 1,711 barrels (1300 was in lined containment)	Volume Recovered 1,560 barrels
Source of Release: PW tanks overflowed	Date and Hour of Occurrence 7-14-16 @ Unknown time	Date and Hour of Discovery 7-14-16 @ 8:00am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson, Shelly Tucker BLM	
By Whom? Brad Blevins via email	Date and Hour: 7-14-16 @ 11:21am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

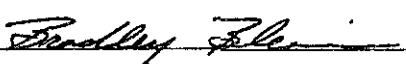
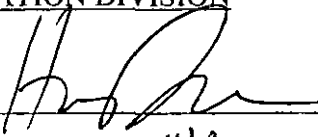
Describe Cause of Problem and Remedial Action Taken.*

BOPCO EHS was notified on 7-14-16 of a release that occurred at the PLU 320H Battery. The produced water tanks ran over filling and overflowing the containment. The battery experienced a power failure and the SCADA alarms failed to communicate the upset conditions. An initial response crew was dispatched to the location to scrape up the saturated surface soils.

Describe Area Affected and Cleanup Action Taken.*

A vacuum truck was called to the location and recovered a total of 1560 barrels of produced water from the lined containment and ground surface. An initial response crew was dispatched to location to scrape the saturated surface soils.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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: 	OIL CONSERVATION DIVISION	
Printed Name: Bradley Blevins	Approved by Environmental Specialist: 	
Title: Assistant Remediation Foreman	Approval Date: 7/21/16	Expiration Date: N/A
E-mail Address: bblevins@basspet.com	Conditions of Approval: ☐ Attached	
Date: 7-19-16 Phone: 432-214-3704	Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO. 8125116 LATER THAN: 8/25/16	

* Attach Additional Sheets If Necessary

ARP-3788

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 April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address 3104 E Greene Street Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name PLU 320 Tank Battery (2RP-2888)	Facility Type Exploration and Production
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-39810	

LOCATION OF RELEASE

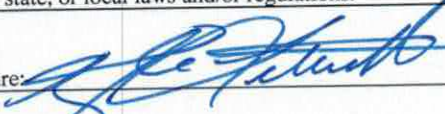
Unit Letter O	Section 4	Township 24S	Range 30E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
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Latitude _____ N 32.243554 _____ Longitude _____ -103.886910 _____ NAD83

NATURE OF RELEASE

Type of Release: Crude Oil	Volume of Release: 20 bbls	Volume Recovered: None
Source of Release: Flare Stack	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: 3/11/15 at 2:30pm
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher	
By Whom? Tony Savoie	Date and Hour : 3/12/15 at 8:30 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* Crude oil was released out of the flare stack. Cause not known at the time of discovery.		
Describe Area Affected and Cleanup Action Taken.* The release flow path and ponded areas measured approximately 3,660 sq. ft. of pasture and pipeline right-of-way's. It also misted an area of approximately 15,600 sq. ft. There are two buried pipelines under the flow path and ponded areas. The stained area was left as is pending final remediation. The impacted soil was excavated. Confirmation soil samples were collected from the release area and excavation between June 26, 2018 and June 29, 2018. Laboratory analytical results for the confirmation soil samples indicate BTEX, TPH, and chloride concentrations are compliant with NMOCD remediation action levels. A Closure Request Report is attached describing all field activities. XTO requests no further action for this release.		
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: 	Approved by Environmental Specialist:	
Printed Name: Kyle Littrell	Approval Date:	Expiration Date:
Title: SH&E Coordinator	Conditions of Approval:	
E-mail Address: Kyle_Littrell@xtoenergy.com	Attached ☐	
Date: 9/17/2018	Phone: 432-221-7331	

* 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

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address 3104 E Greene Street Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name PLU 320H (2RP-3563)	Facility Type Exploration and Production
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-39810	

LOCATION OF RELEASE

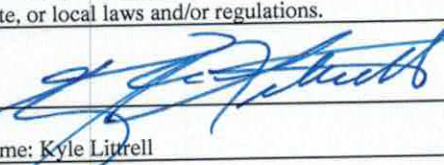
Unit Letter N	Section 4	Township 24S	Range 30E	Feet from the 2590	North/South Line South	Feet from the 1670	East/West Line West	County Eddy
------------------	--------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude _____ N 32.24361 _____ Longitude _____ -103.88657 _____ NAD83

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 11 bbls oil and 10 bbls PW	Volume Recovered: None
Source of Release: Flare Stack	Date and Hour of Occurrence: 2-19-16 @ 11:30 am	Date and Hour of Discovery: 2-19-16 @ 11:55 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos	
By Whom? Bradley Blevins	Date and Hour: 2-19-16 @ 12:32 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* Fluid over ranged production vessels causing fluid to be released out of the flare stack. An environmental response crew was dispatched to the location and began to scrape up the saturated soils; micro blaze was also applied to the vegetation.		
Describe Area Affected and Cleanup Action Taken.* The fluid released affected the pasture to the north/northwest of the flare area. An environmental response crew was dispatched to the location and began to scrape up the saturated soils near the flare; micro blaze was applied to the vegetation within the spray area.		
The impacted soil was excavated. Confirmation soil samples were collected from the release area and excavation between June 26, 2018 and June 29, 2018. Laboratory analytical results for the confirmation soil samples indicate BTEX, TPH, and chloride concentrations are compliant with NMOCD remediation action levels. A Closure Request Report is attached describing all field activities. XTO requests no further action for this release.		
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: 	Approved by Environmental Specialist:	
Printed Name: Kyle Littrell	Approval Date:	Expiration Date:
Title: SH&E Coordinator	Conditions of Approval:	
E-mail Address: Kyle.Littrell@xtoenergy.com	Attached ☐	
Date: 9/17/2018	Phone: 432-221-7331	

* 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

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

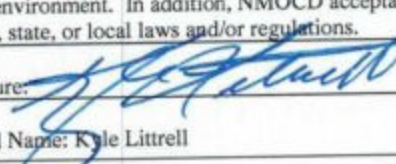
Name of Company XTO Energy	Contact Kyle Littrell
Address 3104 E Greene Street Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name PLU 320H (2RP-3769)	Facility Type: Exploration and Production
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-39810	

LOCATION OF RELEASE

Unit Letter N	Section 4	Township 24S	Range 30E	Feet from the 2590	North/South Line South	Feet from the 1670	East/West Line West	County Eddy
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Latitude 32.242954 Longitude -103.885796 NAD83

NATURE OF RELEASE

Type of Release: Crude Oil and Produced Water	Volume of Release: 111 bbls oil and 35 bbls produced water	Volume Recovered: 80 bbls oil and 15 bbls of produced water
Source of Release: Heater-Treater Gasket	Date and Hour of Occurrence: 7-6-16 @ 11:30 am	Date and Hour of Discovery: 7-6-16 @ 8:45 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Jim Amos	
By Whom? Bradley Blevins	Date and Hour: 7-6-16 @ 11:13 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		
Describe Cause of Problem and Remedial Action Taken.* BOPCO EHS was notified of a release that occurred when the gasket failed on the production heater treater. The majority of the fluid was contained within an earth berm with the exception of a light spray to the location. A vacuum truck was called to the location to recover the standing fluid. A response crew was sent to the location to conduct an initial scrape of the well pad.		
Describe Area Affected and Cleanup Action Taken.* The majority of the affected area was within the earth berm that surrounds the production equipment; the standing fluid was recovered by a vacuum truck. A light spray to the location was observed; an initial response crew conducted a scrape of the well pad. The impacted soil was excavated. Confirmation soil samples were collected from the release area and excavation between March 6, 2018 and June 26, 2018. Laboratory analytical results for the confirmation soil samples indicate BTEX, TPH, and chloride concentrations are compliant with NMOCD remediation action levels, except in eastern excavation sidewall where impacted soil within close proximity to the active process equipment was left in-place per XTO's safety policy. The remaining impacted will be excavated when the site is closed or reconfigured to allow for remediation to be completed. A Closure Request Report is attached describing all field activities. XTO requests no further action for this release.		
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: 		OIL CONSERVATION DIVISION
Printed Name: Kyle Littrell		Approved by Environmental Specialist:
Title: SH&E Coordinator		Approval Date: Expiration Date:
E-mail Address: Kyle.Littrell@xtoenergy.com		Conditions of Approval: Attached ☐
Date: 9/17/2018 Phone: 432-221-7331		

District I
1625 N. French Dr., Hobbs, NM 88240
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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 April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company XTO Energy	Contact Kyle Littrell
Address 3104 E Greene Street Carlsbad, N.M. 88220	Telephone No. 432-221-7331
Facility Name PLU 320H (2RP-3788)	Facility Type: Exploration and Production
Surface Owner Federal	Mineral Owner Federal
API No. 30-015-39810	

LOCATION OF RELEASE

Unit Letter N	Section 4	Township 24S	Range 30E	Feet from the 2590	North/South Line South	Feet from the 1670	East/West Line West	County Eddy
------------------	--------------	-----------------	--------------	-----------------------	---------------------------	-----------------------	------------------------	----------------

Latitude _____ N 32.243083 Longitude _____ -103.886519 NAD83

NATURE OF RELEASE

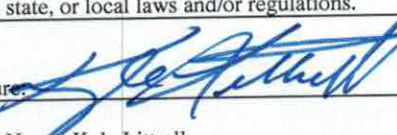
Type of Release: Produced water	Volume of Release: 1,711 bbls (1300 was in lined containment)	Volume Recovered: 1,560 bbls
Source of Release: PW tank over flowed	Date and Hour of Occurrence: 7-14-16 @ unknown time	Date and Hour of Discovery: 7-14-16 @ 8:00 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Heather Patterson and Shelly Tucker	
By Whom? Bradley Blevins via email	Date and Hour: 7-14-16 @ 11:21 am	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

Describe Cause of Problem and Remedial Action Taken.*
BOPCO EHS was notified on 7-14-16 of a release that occurred at the PLU 320H Battery. The produced water tank ran over filling and overflowing the containment. The battery experienced a power failure and the SCADA alarms failed to communicate the upset conditions. An initial response crew was dispatched to location to scrape the saturated surface soils.

Describe Area Affected and Cleanup Action Taken.*
A vacuum truck was called to the location and recovered a total of 1560 bbls of produced water from the lined containment and ground surface. An initial response team was dispatched to location to scrape saturated surface soils.

The impacted soil was excavated. Confirmation soil samples were collected from the release area and excavation between March 6, 2018 and June 28, 2018. Laboratory analytical results for the confirmation soil samples indicate BTEX, TPH, and chloride concentrations are compliant with NMOCD remediation action levels. A Closure Request Report is attached describing all field activities. XTO requests no further action for this release.

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: 		OIL CONSERVATION DIVISION	
Printed Name: Kyle Littrell		Approved by Environmental Specialist:	
Title: SH&E Coordinator		Approval Date:	Expiration Date:
E-mail Address: Kyle_Littrell@xtoenergy.com		Conditions of Approval:	Attached ☐
Date: 9/17/2018	Phone: 432-221-7331		

* Attach Additional Sheets If Necessary

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS



Analytical Report 590702

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 320H/012918082

06-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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)



06-JUL-18

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

Reference: XENCO Report No(s): **590702**
PLU 320H/012918082
Project Address: 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) 590702. 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. 590702 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 590702****LT Environmental, Inc., Arvada, CO**

PLU 320H/012918082

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	06-26-18 10:00	6 ft	590702-001
SS2	S	06-26-18 10:05	6 ft	590702-002
SS3	S	06-26-18 10:10	6 ft	590702-003
SS5	S	06-26-18 10:20	6 ft	590702-005
SS6	S	06-26-18 10:25	6 ft	590702-006
SS1A	S	06-26-18 11:00	2 ft	590702-007
SS2A	S	06-26-18 11:05	2 ft	590702-008
SS3A	S	06-26-18 11:10	2 ft	590702-009
SS5A	S	06-26-18 11:20	2 ft	590702-011
SS6A	S	06-26-18 11:25	2 ft	590702-012
SS4	S	06-26-18 10:15	6 ft	Not Analyzed
SS4A	S	06-26-18 11:15	2 ft	Not Analyzed



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320H/012918082

Project ID:

Work Order Number(s): 590702

Report Date: 06-JUL-18

Date Received: 06/28/2018

Sample receipt non conformances and comments:

Per sampler (Daniel Thomas) HOLD sample 004 and 010, written on COC in error JKR 06/28/18

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055565 BTEX by EPA 8021B

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



Certificate of Analysis Summary 590702

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H/012918082



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am

Report Date: 06-JUL-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	590702-001	590702-002	590702-003	590702-005	590702-006	590702-007
	Field Id:	SS1	SS2	SS3	SS5	SS6	SS1A
	Depth:	6- ft	6- ft	6- ft	6- ft	6- ft	2- ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-26-18 10:00	Jun-26-18 10:05	Jun-26-18 10:10	Jun-26-18 10:20	Jun-26-18 10:25	Jun-26-18 11:00
BTEX by EPA 8021B	Extracted:	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00
	Analyzed:	Jul-06-18 03:19	Jul-06-18 03:35	Jul-06-18 03:51	Jul-06-18 04:09	Jul-06-18 04:27	Jul-06-18 04:43
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Toluene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
m,p-Xylenes		<0.00404 0.00404	<0.00398 0.00398	<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	<0.00399 0.00399
o-Xylene		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total Xylenes		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Total BTEX		<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200
Inorganic Anions by EPA 300	Extracted:	Jul-02-18 14:30	Jul-02-18 14:30	Jul-02-18 14:30	Jul-02-18 14:30	Jul-03-18 09:30	Jul-03-18 09:30
	Analyzed:	Jul-02-18 22:55	Jul-02-18 23:00	Jul-02-18 23:06	Jul-02-18 23:11	Jul-03-18 10:49	Jul-03-18 11:11
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		425 5.00	394 4.99	78.1 4.98	5.85 4.95	244 5.00	343 4.99
TPH by SW8015 Mod	Extracted:	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00
	Analyzed:	Jul-05-18 12:08	Jul-06-18 07:56	Jul-06-18 08:15	Jul-05-18 13:46	Jul-05-18 14:05	Jul-05-18 14:25
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg 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)		32.8 15.0	1100 15.0	2000 15.0	<15.0 15.0	48.6 15.0	<15.0 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	45.5 15.0	30.1 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		32.8 15.0	1150 15.0	2030 15.0	<15.0 15.0	48.6 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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 590702

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H/012918082



Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am

Report Date: 06-JUL-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	590702-008	590702-009	590702-011	590702-012		
	<i>Field Id:</i>	SS2A	SS3A	SS5A	SS6A		
	<i>Depth:</i>	2- ft	2- ft	2- ft	2- ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Jun-26-18 11:05	Jun-26-18 11:10	Jun-26-18 11:20	Jun-26-18 11:25		
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00		
	<i>Analyzed:</i>	Jul-06-18 05:01	Jul-06-18 05:19	Jul-06-18 05:37	Jul-06-18 05:55		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402	<0.00404 0.00404		
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00202 0.00202		
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30		
	<i>Analyzed:</i>	Jul-03-18 11:16	Jul-03-18 11:22	Jul-03-18 11:27	Jul-03-18 11:43		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		393 4.96	56.1 4.99	9.79 4.95	92.0 5.00		
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00		
	<i>Analyzed:</i>	Jul-05-18 14:44	Jul-05-18 15:04	Jul-05-18 15:24	Jul-05-18 15:43		
	<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)		1130 15.0	56.2 14.9	<15.0 15.0	<15.0 15.0		
Oil Range Hydrocarbons (ORO)		37.8 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0		
Total TPH		1170 15.0	56.2 14.9	<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

Jessica Kramer
Project Assistant



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS1 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-001 Date Collected: 06.26.18 10.00 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.02.18 14.30 Basis: Wet Weight
 Seq Number: 3055272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	425	5.00	mg/kg	07.02.18 22.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 12.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	32.8	15.0	mg/kg	07.05.18 12.08		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 12.08	U	1
Total TPH	PHC635	32.8	15.0	mg/kg	07.05.18 12.08		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.05.18 12.08	
o-Terphenyl	84-15-1	108	%	70-135	07.05.18 12.08	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS1
Lab Sample Id: 590702-001

Matrix: Soil
Date Collected: 06.26.18 10.00

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.06.18 03.19	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.06.18 03.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.06.18 03.19		
4-Bromofluorobenzene	460-00-4	129	%	70-130	07.06.18 03.19		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS2 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-002 Date Collected: 06.26.18 10.05 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.02.18 14.30 Basis: Wet Weight
 Seq Number: 3055272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	394	4.99	mg/kg	07.02.18 23.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 07.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	1100	15.0	mg/kg	07.06.18 07.56		1
Oil Range Hydrocarbons (ORO)	PHCG2835	45.5	15.0	mg/kg	07.06.18 07.56		1
Total TPH	PHC635	1150	15.0	mg/kg	07.06.18 07.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.06.18 07.56	
o-Terphenyl	84-15-1	98	%	70-135	07.06.18 07.56	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS2
Lab Sample Id: 590702-002

Matrix: Soil
Date Collected: 06.26.18 10.05

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.06.18 03.35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.06.18 03.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.06.18 03.35		
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.06.18 03.35		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS3 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-003 Date Collected: 06.26.18 10.10 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.02.18 14.30 Basis: Wet Weight
 Seq Number: 3055272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	78.1	4.98	mg/kg	07.02.18 23.06		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 08.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	2000	15.0	mg/kg	07.06.18 08.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	30.1	15.0	mg/kg	07.06.18 08.15		1
Total TPH	PHC635	2030	15.0	mg/kg	07.06.18 08.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.06.18 08.15	
o-Terphenyl	84-15-1	126	%	70-135	07.06.18 08.15	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS3
Lab Sample Id: 590702-003

Matrix: Soil
Date Collected: 06.26.18 10.10

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.06.18 03.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 03.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	81	%	70-130	07.06.18 03.51		
1,4-Difluorobenzene	540-36-3	70	%	70-130	07.06.18 03.51		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS5 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-005 Date Collected: 06.26.18 10.20 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.02.18 14.30 Basis: Wet Weight
 Seq Number: 3055272

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.85	4.95	mg/kg	07.02.18 23.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 13.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 13.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 13.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 13.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.05.18 13.46	
o-Terphenyl	84-15-1	96	%	70-135	07.05.18 13.46	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS5
Lab Sample Id: 590702-005

Matrix: Soil
Date Collected: 06.26.18 10.20

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.06.18 04.09	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.06.18 04.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	07.06.18 04.09		
1,4-Difluorobenzene	540-36-3	123	%	70-130	07.06.18 04.09		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS6 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-006 Date Collected: 06.26.18 10.25 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	5.00	mg/kg	07.03.18 10.49		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 14.05	U	1
Diesel Range Organics (DRO)	C10C28DRO	48.6	15.0	mg/kg	07.05.18 14.05		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 14.05	U	1
Total TPH	PHC635	48.6	15.0	mg/kg	07.05.18 14.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.05.18 14.05	
o-Terphenyl	84-15-1	95	%	70-135	07.05.18 14.05	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS6
Lab Sample Id: 590702-006

Matrix: Soil
Date Collected: 06.26.18 10.25

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.06.18 04.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 04.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	102	%	70-130	07.06.18 04.27		
1,4-Difluorobenzene	540-36-3	78	%	70-130	07.06.18 04.27		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS1A** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-007 Date Collected: 06.26.18 11.00 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	4.99	mg/kg	07.03.18 11.11		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 14.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 14.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 14.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 14.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.05.18 14.25	
o-Terphenyl	84-15-1	93	%	70-135	07.05.18 14.25	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS1A**
Lab Sample Id: 590702-007

Matrix: Soil
Date Collected: 06.26.18 11.00

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.06.18 04.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 04.43	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	79	%	70-130	07.06.18 04.43		
1,4-Difluorobenzene	540-36-3	105	%	70-130	07.06.18 04.43		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS2A Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-008 Date Collected: 06.26.18 11.05 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	393	4.96	mg/kg	07.03.18 11.16		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 14.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	1130	15.0	mg/kg	07.05.18 14.44		1
Oil Range Hydrocarbons (ORO)	PHCG2835	37.8	15.0	mg/kg	07.05.18 14.44		1
Total TPH	PHC635	1170	15.0	mg/kg	07.05.18 14.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.05.18 14.44	
o-Terphenyl	84-15-1	97	%	70-135	07.05.18 14.44	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS2A
Lab Sample Id: 590702-008

Matrix: Soil
Date Collected: 06.26.18 11.05

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.06.18 05.01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.06.18 05.01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.06.18 05.01		
4-Bromofluorobenzene	460-00-4	103	%	70-130	07.06.18 05.01		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS3A** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-009 Date Collected: 06.26.18 11.10 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.1	4.99	mg/kg	07.03.18 11.22		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.05.18 15.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	56.2	14.9	mg/kg	07.05.18 15.04		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.05.18 15.04	U	1
Total TPH	PHC635	56.2	14.9	mg/kg	07.05.18 15.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.05.18 15.04	
o-Terphenyl	84-15-1	94	%	70-135	07.05.18 15.04	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS3A
Lab Sample Id: 590702-009

Matrix: Soil
Date Collected: 06.26.18 11.10

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.06.18 05.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.06.18 05.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	07.06.18 05.19		
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.06.18 05.19		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS5A Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-011 Date Collected: 06.26.18 11.20 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.79	4.95	mg/kg	07.03.18 11.27		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 15.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 15.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 15.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 15.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	07.05.18 15.24	
o-Terphenyl	84-15-1	90	%	70-135	07.05.18 15.24	



Certificate of Analytical Results 590702

LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS5A
Lab Sample Id: 590702-011

Matrix: Soil
Date Collected: 06.26.18 11.20

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.06.18 05.37	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.06.18 05.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	79	%	70-130	07.06.18 05.37		
1,4-Difluorobenzene	540-36-3	81	%	70-130	07.06.18 05.37		



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS6A** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590702-012 Date Collected: 06.26.18 11.25 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.0	5.00	mg/kg	07.03.18 11.43		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 15.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 15.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 15.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 15.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.05.18 15.43	
o-Terphenyl	84-15-1	93	%	70-135	07.05.18 15.43	



Certificate of Analytical Results 590702



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS6A**
Lab Sample Id: 590702-012

Matrix: Soil
Date Collected: 06.26.18 11.25

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	07.06.18 05.55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.06.18 05.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	07.06.18 05.55		
4-Bromofluorobenzene	460-00-4	98	%	70-130	07.06.18 05.55		



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 320H/012918082

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055272

MB Sample Id: 7657698-1-BLK

Matrix: Solid

LCS Sample Id: 7657698-1-BKS

Prep Method: E300P

Date Prep: 07.02.18

LCSD Sample Id: 7657698-1-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	244	98	90-110	1	20	mg/kg	07.02.18 20:35	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

MB Sample Id: 7657778-1-BLK

Matrix: Solid

LCS Sample Id: 7657778-1-BKS

Prep Method: E300P

Date Prep: 07.03.18

LCSD Sample Id: 7657778-1-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	236	94	239	96	90-110	1	20	mg/kg	07.03.18 10:38	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055272

Parent Sample Id: 590700-003

Matrix: Soil

MS Sample Id: 590700-003 S

Prep Method: E300P

Date Prep: 07.02.18

MSD Sample Id: 590700-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	230	92	234	94	90-110	2	20	mg/kg	07.02.18 20:51	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055272

Parent Sample Id: 590701-004

Matrix: Soil

MS Sample Id: 590701-004 S

Prep Method: E300P

Date Prep: 07.02.18

MSD Sample Id: 590701-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	125	250	368	97	372	99	90-110	1	20	mg/kg	07.02.18 22:07	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590702-006

Matrix: Soil

MS Sample Id: 590702-006 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590702-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	244	250	484	96	483	96	90-110	0	20	mg/kg	07.03.18 11:00	

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 320H/012918082

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590704-003

Matrix: Soil

MS Sample Id: 590704-003 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590704-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	436	250	661	90	663	91	90-110	0	20	mg/kg	07.03.18 12:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055653

MB Sample Id: 7657920-1-BLK

Matrix: Solid

LCS Sample Id: 7657920-1-BKS

Prep Method: TX1005P

Date Prep: 07.05.18

LCSD Sample Id: 7657920-1-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	937	94	992	99	70-135	6	20	mg/kg	07.05.18 11:29	
Diesel Range Organics (DRO)	<15.0	1000	958	96	1020	102	70-135	6	20	mg/kg	07.05.18 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		117		123		70-135	%	07.05.18 11:29
o-Terphenyl	107		105		114		70-135	%	07.05.18 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055653

Parent Sample Id: 590702-001

Matrix: Soil

MS Sample Id: 590702-001 S

Prep Method: TX1005P

Date Prep: 07.05.18

MSD Sample Id: 590702-001 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	932	93	959	96	70-135	3	20	mg/kg	07.05.18 12:27	
Diesel Range Organics (DRO)	32.8	999	1020	99	1060	103	70-135	4	20	mg/kg	07.05.18 12:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		118		70-135	%	07.05.18 12:27
o-Terphenyl	102		104		70-135	%	07.05.18 12:27

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 320H/012918082

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055565

MB Sample Id: 7657885-1-BLK

Matrix: Solid

LCS Sample Id: 7657885-1-BKS

Prep Method: SW5030B

Date Prep: 07.05.18

LCSD Sample Id: 7657885-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0852	85	0.0933	92	70-130	9	35	mg/kg	07.06.18 01:35	
Toluene	<0.00201	0.100	0.0820	82	0.0953	94	70-130	15	35	mg/kg	07.06.18 01:35	
Ethylbenzene	<0.00201	0.100	0.0813	81	0.0940	93	70-130	14	35	mg/kg	07.06.18 01:35	
m,p-Xylenes	<0.00402	0.201	0.168	84	0.194	96	70-130	14	35	mg/kg	07.06.18 01:35	
o-Xylene	<0.00201	0.100	0.0820	82	0.0921	91	70-130	12	35	mg/kg	07.06.18 01:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		77		88		70-130	%	07.06.18 01:35
4-Bromofluorobenzene	86		73		95		70-130	%	07.06.18 01:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055565

Parent Sample Id: 590702-001

Matrix: Soil

MS Sample Id: 590702-001 S

Prep Method: SW5030B

Date Prep: 07.05.18

MSD Sample Id: 590702-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0823	83	0.0904	90	70-130	9	35	mg/kg	07.06.18 02:11	
Toluene	<0.00199	0.0996	0.0836	84	0.0927	93	70-130	10	35	mg/kg	07.06.18 02:11	
Ethylbenzene	<0.00199	0.0996	0.0797	80	0.0890	89	70-130	11	35	mg/kg	07.06.18 02:11	
m,p-Xylenes	<0.00398	0.199	0.163	82	0.179	90	70-130	9	35	mg/kg	07.06.18 02:11	
o-Xylene	<0.00199	0.0996	0.0742	74	0.0852	85	70-130	14	35	mg/kg	07.06.18 02:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		124		70-130	%	07.06.18 02:11
4-Bromofluorobenzene	91		102		70-130	%	07.06.18 02:11

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



Setting the Standard since 1990

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CHAIN OF CUSTODY

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Revision 2016.7

Client / Reporting Information										Project Information										Analytical Information										Matrix Codes																													
Company Name / Branch: UT Environmental - Permian Office										Project Name/Number: Perm 3204 / 010918082																																																	
Company Address: 3300 N. Highway 2, Unit 103, Midland, TX										Project Location: NM																																																	
Email: Abaker@utenviro.com Phone No: 932-704-5178										Invoice To: XTO Energy - Uye L.H.H.																																																	
Project Contact: Adrian Baker										PO Number: 2EP-2885, 3563																																																	
Sampler's Name: Daniel Thomas																																																											
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCI	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments																																												
1	SS1	6"	6/28	1000	Soil	1									X	BTEX TPH Chloride																																											
2	SS2			1005											X																																												
3	SS3			1010											X																																												
4	SS4			1015											X																																												
5	SS5			1020											X																																												
6	SS6			1025											X																																												
7	SS1A			1100											X																																												
8	SS2A			1105											X																																												
9	SS3A			1110											X																																												
10	SS4A			1115											X																																												
Turnaround Time (Business days)															Data Deliverable Information															Notes:																													
☐ Same Day TAT															☐ Level II Std OC															☐ Level IV (Full Data Pkg /raw data)																													
☐ Next Day EMERGENCY															☐ Level III Std OC+ Forms															☐ TRRP Level IV																													
☐ 2 Day EMERGENCY															☐ Contract TAT															☐ Level 3 (CLP Forms)															☐ UST / RG -411														
☐ 3 Day EMERGENCY															☐ Standard															☐ Level II Report with TRRP checklist																													
TAT Starts Day received by Lab, if received by 5:00 pm																																																											
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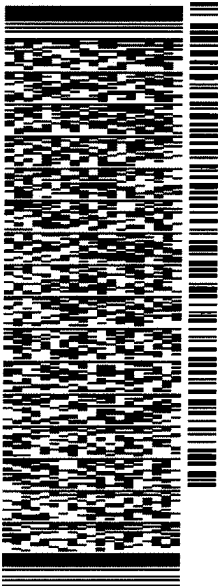
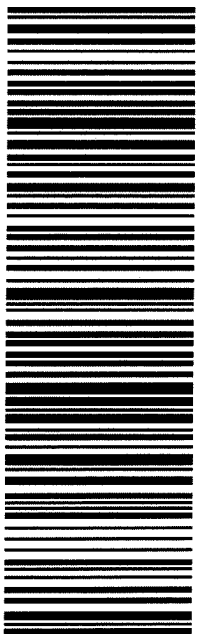
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Service Center - Baton Rouge

Service Center- Amarillo, TX (806) 678-4514

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[illegible]

ORIGIN ID:MAFA (800) 794-1296		SHIP DATE: 27 JUN 18	
XENCO		ACTWTG: 61.00 LB	
XENCO		CAD: 101813706/NET3980	
1211 W. FLORIDA AVE		DIMS: 26x14x14 IN	
MIDLAND, TX 79701		BILL RECIPIENT	
UNITED STATES US			
TO XENCO			
XENCO			
1211 W. FLORIDA AVE			
MIDLAND TX 79701			
(800) 794-1296		REF:	
INV:		DEPT:	
PO:			
			
			
J181118012801ur			
TRK# 7725 8459 3635		THU - 28 JUN 10:30A	
0201		PRIORITY OVERNIGHT	
41 MAFA		TX-US LBB	
		79701	

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.

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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

CUSTODY SEAL
Date 6/27/14
Signature [Signature]

Thermo
SCIENTIFIC
90009



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/28/2018 10:10:00 AM

Work Order #: 590702

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)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#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)?	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: 06/28/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/28/2018

Analytical Report 591022

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 320H/12918082

012918082

10-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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-JUL-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **591022**

PLU 320H/12918082

Project Address: 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) 591022. 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. 591022 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 591022****LT Environmental, Inc., Arvada, CO**

PLU 320H/12918082

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS1	S	06-28-18 10:30	3 ft	591022-001
SW1	S	06-28-18 10:35	2 ft	591022-002
SW2	S	06-28-18 10:40	2 ft	591022-003
SW3	S	06-28-18 10:45	2 ft	591022-004
SW4	S	06-28-18 10:50	2 ft	591022-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320H/12918082

Project ID: 012918082
Work Order Number(s): 591022

Report Date: 10-JUL-18
Date Received: 06/30/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055790 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591022

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H/12918082



Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Sat Jun-30-18 09:00 am
Report Date: 10-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591022-001	591022-002	591022-003	591022-004	591022-005	
	<i>Field Id:</i>	FS1	SW1	SW2	SW3	SW4	
	<i>Depth:</i>	3- ft	2- ft	2- ft	2- ft	2- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Jun-28-18 10:30	Jun-28-18 10:35	Jun-28-18 10:40	Jun-28-18 10:45	Jun-28-18 10:50	
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45	
	<i>Analyzed:</i>	Jul-07-18 18:40	Jul-07-18 18:58	Jul-07-18 19:16	Jul-07-18 19:34	Jul-07-18 20:28	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00402 0.00402	<0.00399 0.00399	<0.00402 0.00402	
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00201 0.00201	<0.00200 0.00200	<0.00201 0.00201	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-05-18 16:30	Jul-05-18 16:30	Jul-05-18 16:30	Jul-05-18 16:30	Jul-05-18 16:30	
	<i>Analyzed:</i>	Jul-06-18 00:30	Jul-06-18 00:36	Jul-06-18 00:41	Jul-06-18 00:47	Jul-06-18 00:52	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		98.7 4.96	102 4.99	64.4 5.00	101 4.91	128 4.90	
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-06-18 14:00	Jul-06-18 14:00	Jul-06-18 14:00	Jul-06-18 14:00	Jul-06-18 14:00	
	<i>Analyzed:</i>	Jul-07-18 00:51	Jul-07-18 01:49	Jul-07-18 02:09	Jul-07-18 02:28	Jul-07-18 02:48	
	<i>Units/RL:</i>	mg/kg RL	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	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<14.9 14.9	<15.0 15.0	<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0	<14.9 14.9	<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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 591022

LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **FS1** Matrix: **Soil** Date Received: 06.30.18 09.00
 Lab Sample Id: 591022-001 Date Collected: 06.28.18 10.30 Sample Depth: 3 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 07.05.18 16.30 Basis: **Wet Weight**
 Seq Number: 3055724

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.7	4.96	mg/kg	07.06.18 00.30		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 07.06.18 14.00 Basis: **Wet Weight**
 Seq Number: 3055782

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 00.51	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 00.51	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 00.51	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 00.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 00.51		
o-Terphenyl	84-15-1	96	%	70-135	07.07.18 00.51		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **FS1**
Lab Sample Id: 591022-001

Matrix: Soil
Date Collected: 06.28.18 10.30

Date Received: 06.30.18 09.00
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.07.18 18.40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.07.18 18.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	72	%	70-130	07.07.18 18.40		
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.07.18 18.40		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW1**
Lab Sample Id: 591022-002

Matrix: Soil
Date Collected: 06.28.18 10.35

Date Received: 06.30.18 09.00
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055724

Date Prep: 07.05.18 16.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	102	4.99	mg/kg	07.06.18 00.36		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055782

Date Prep: 07.06.18 14.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.07.18 01.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.07.18 01.49	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.07.18 01.49	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.07.18 01.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 01.49		
o-Terphenyl	84-15-1	96	%	70-135	07.07.18 01.49		



Certificate of Analytical Results 591022

LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW1**

Matrix: Soil

Date Received: 06.30.18 09.00

Lab Sample Id: 591022-002

Date Collected: 06.28.18 10.35

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.18 18.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.18 18.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	77	%	70-130	07.07.18 18.58		
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.07.18 18.58		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW2** Matrix: **Soil** Date Received: 06.30.18 09.00
 Lab Sample Id: 591022-003 Date Collected: 06.28.18 10.40 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 07.05.18 16.30 Basis: **Wet Weight**
 Seq Number: 3055724

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	64.4	5.00	mg/kg	07.06.18 00.41		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 07.06.18 14.00 Basis: **Wet Weight**
 Seq Number: 3055782

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 02.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 02.09	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 02.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 02.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 02.09	
o-Terphenyl	84-15-1	95	%	70-135	07.07.18 02.09	



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW2**
Lab Sample Id: 591022-003

Matrix: **Soil**
Date Collected: 06.28.18 10.40

Date Received: 06.30.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: **ALJ**

% Moisture:

Analyst: **ALJ**

Date Prep: 07.07.18 07.45

Basis: **Wet Weight**

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.18 19.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.18 19.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	73	%	70-130	07.07.18 19.16		
1,4-Difluorobenzene	540-36-3	87	%	70-130	07.07.18 19.16		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW3**
Lab Sample Id: 591022-004

Matrix: Soil
Date Collected: 06.28.18 10.45

Date Received: 06.30.18 09.00
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055724

Date Prep: 07.05.18 16.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	4.91	mg/kg	07.06.18 00.47		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055782

Date Prep: 07.06.18 14.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 02.28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 02.28	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 02.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 02.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 02.28		
o-Terphenyl	84-15-1	94	%	70-135	07.07.18 02.28		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW3**
Lab Sample Id: 591022-004

Matrix: Soil
Date Collected: 06.28.18 10.45

Date Received: 06.30.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.18 19.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.18 19.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	73	%	70-130	07.07.18 19.34		
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.07.18 19.34		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW4**
Lab Sample Id: 591022-005

Matrix: Soil
Date Collected: 06.28.18 10.50

Date Received: 06.30.18 09.00
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055724

Date Prep: 07.05.18 16.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	128	4.90	mg/kg	07.06.18 00.52		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055782

Date Prep: 07.06.18 14.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 02.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 02.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 02.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 02.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	95	%	70-135	07.07.18 02.48		
o-Terphenyl	84-15-1	97	%	70-135	07.07.18 02.48		



Certificate of Analytical Results 591022



LT Environmental, Inc., Arvada, CO

PLU 320H/12918082

Sample Id: **SW4**

Matrix: Soil

Date Received: 06.30.18 09.00

Lab Sample Id: 591022-005

Date Collected: 06.28.18 10.50

Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.07.18 20.28	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.07.18 20.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	125	%	70-130	07.07.18 20.28		
4-Bromofluorobenzene	460-00-4	124	%	70-130	07.07.18 20.28		



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 320H/12918082

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

MB Sample Id: 7657873-1-BLK

Matrix: Solid

LCS Sample Id: 7657873-1-BKS

Prep Method: E300P

Date Prep: 07.05.18

LCSD Sample Id: 7657873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	236	94	244	98	90-110	3	20	mg/kg	07.05.18 22:21	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

Parent Sample Id: 591014-001

Matrix: Soil

MS Sample Id: 591014-001 S

Prep Method: E300P

Date Prep: 07.05.18

MSD Sample Id: 591014-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	154	249	392	96	399	98	90-110	2	20	mg/kg	07.05.18 22:37	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055724

Parent Sample Id: 591015-007

Matrix: Soil

MS Sample Id: 591015-007 S

Prep Method: E300P

Date Prep: 07.05.18

MSD Sample Id: 591015-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	6.36	246	237	94	249	99	90-110	5	20	mg/kg	07.05.18 23:53	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055782

MB Sample Id: 7657984-1-BLK

Matrix: Solid

LCS Sample Id: 7657984-1-BKS

Prep Method: TX1005P

Date Prep: 07.06.18

LCSD Sample Id: 7657984-1-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	976	98	992	99	70-135	2	20	mg/kg	07.06.18 20:38	
Diesel Range Organics (DRO)	<15.0	1000	1010	101	1040	104	70-135	3	20	mg/kg	07.06.18 20:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		116		114		70-135	%	07.06.18 20:38
o-Terphenyl	108		104		110		70-135	%	07.06.18 20:38

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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 320H/12918082

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055782

Parent Sample Id: 591010-002

Matrix: Soil

MS Sample Id: 591010-002 S

Prep Method: TX1005P

Date Prep: 07.06.18

MSD Sample Id: 591010-002 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	997	977	98	1030	103	70-135	5	20	mg/kg	07.06.18 21:56	
Diesel Range Organics (DRO)	<15.0	997	1010	101	1060	106	70-135	5	20	mg/kg	07.06.18 21:56	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	111		118		70-135	%	07.06.18 21:56
o-Terphenyl	103		105		70-135	%	07.06.18 21:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

MB Sample Id: 7657996-1-BLK

Matrix: Solid

LCS Sample Id: 7657996-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.18

LCSD Sample Id: 7657996-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0928	93	0.0923	91	70-130	1	35	mg/kg	07.07.18 15:05	
Toluene	<0.00201	0.100	0.0940	94	0.0945	94	70-130	1	35	mg/kg	07.07.18 15:05	
Ethylbenzene	<0.00201	0.100	0.0936	94	0.0934	92	70-130	0	35	mg/kg	07.07.18 15:05	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.195	97	70-130	3	35	mg/kg	07.07.18 15:05	
o-Xylene	<0.00201	0.100	0.0891	89	0.0988	98	70-130	10	35	mg/kg	07.07.18 15:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		101		99		70-130	%	07.07.18 15:05
4-Bromofluorobenzene	88		80		88		70-130	%	07.07.18 15:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: SW5030B

Date Prep: 07.07.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0834	83	0.0819	81	70-130	2	35	mg/kg	07.07.18 15:41	
Toluene	<0.00200	0.100	0.0840	84	0.0776	77	70-130	8	35	mg/kg	07.07.18 15:41	
Ethylbenzene	<0.00200	0.100	0.0815	82	0.0771	76	70-130	6	35	mg/kg	07.07.18 15:41	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.157	78	70-130	5	35	mg/kg	07.07.18 15:41	
o-Xylene	<0.00200	0.100	0.0793	79	0.0763	76	70-130	4	35	mg/kg	07.07.18 15:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		83		70-130	%	07.07.18 15:41
4-Bromofluorobenzene	83		78		70-130	%	07.07.18 15:41

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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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Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge

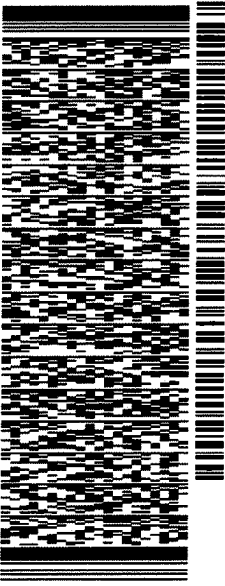
Service Center- Amarillo, TX (806)678-4514
Service Center- Hobbs, NM (575) 392-7550

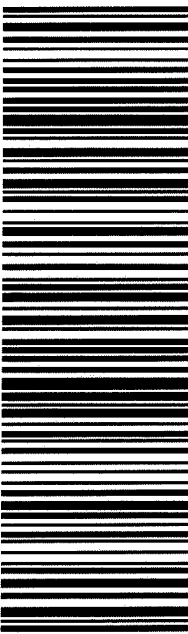
CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

Client / Reporting Information						Project Information							Analytical Information								Matrix Codes			
Company Name / Branch: L.E. Environmental, Inc. - Permian Office Company Address: 3300 N. A St., Bldg. Unit 103 Midland TX Email: Abaker@lennv.com 432 704 5178						Project Name/Number: FLU 526 it 1012918082 Project Location: M M Invoice To: XTC Energy-Kyle Lithium PO Number: 2KP-2888, 3563																		
Sampler's Name: Daniel Thomas																								
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Notes:									
1	F52	3'	6/28/18	1030	SW1	1									BTEX									
2	SW1	2'		1035											TPH									
3	SW2			1046											chloride									
4	SW3			1045																				
5	SW4			1050																				
6																								
7																								
8																								
9																								
10																								
Turnaround Time (Business days)						Data Deliverable Information																		
☐ Same Day TAT						☐ Level II Std QC										☐ Level IV (Full Data Pkg / raw data)								
☐ Next Day EMERGENCY						☐ Level III Std QC + Forms										☐ TRRP Level IV								
☐ 2 Day EMERGENCY						☐ Contract TAT										☐ Level 3 (CLP Forms)								
☐ 3 Day EMERGENCY						☒ Standard										☐ Level II Report with TRRP checklist								
TAT Starts Day received by Lab, if received by 5:00 pm																								
Relinquished by Sampler:						SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY										FED-EX / UPS Tracking # 772600529394								
Date Time: 6/28/18 17:30						Received By: 1. Chris Pineda 6/28/18 17:37										Relinquished By: 2. Chris Pineda 6/29/18 15:30								
Relinquished By:						Date Time: 6/28/18 17:30										Received By: 1. Chris Pineda 6/28/18 17:37								
Relinquished by:						Date Time: 6/28/18 17:30										Received By: 2. Chris Pineda 6/29/18 15:30								
Relinquished by:						Date Time: 6/28/18 17:30										Received By: 3. Chris Pineda 6/29/18 15:30								
Relinquished by:						Date Time: 6/28/18 17:30										Received By: 4. Chris Pineda 6/29/18 15:30								
Relinquished by:						Date Time: 6/28/18 17:30										Received By: 5. Chris Pineda 6/29/18 15:30								

ORIGIN ID:MAFA (806) 794-1296 XENCO XENCO 1211 W. FLORIDA AVE MIDLAND, TX 79701 UNITED STATES US	SHIP DATE: 29 JUN 18 ACTWGT: 40.00 LB CAD: 101813706/NET3980 DIMS: 25x15x16 IN BILL RECIPIENT
TO XENCO FEDEX OFFICE PRINT & SHIP CENTER FEDEX OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 (806) 794-1296 INV: REF: PO: DEPT:	
 	
552J293DF/CA5	

TRK# 7726 0705 2739 0201	SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI TX-US LBB
	

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Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/30/2018 09:00:00 AM

Work Order #: 591022

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)?	3.2
#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: 07/02/2018

Checklist reviewed by:

Jessica Kramer

Date: 07/02/2018

Analytical Report 591176

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 320H/012918082

012918082

11-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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)



11-JUL-18

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

Reference: XENCO Report No(s): **591176**
PLU 320H/012918082
Project Address: 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) 591176. 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. 591176 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

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**Sample Cross Reference 591176****LT Environmental, Inc., Arvada, CO**

PLU 320H/012918082

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS16	S	06-29-18 10:00	6 In	591176-001
SS17	S	06-29-18 10:05	6 In	591176-002
SS18	S	06-29-18 10:10	6 In	591176-003



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320H/012918082

Project ID: 012918082

Work Order Number(s): 591176

Report Date: 11-JUL-18

Date Received: 07/03/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055856 BTEX by EPA 8021B

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

Batch: LBA-3056046 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591176

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H/012918082



Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Tue Jul-03-18 10:47 am
Report Date: 11-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591176-001	591176-002	591176-003			
	<i>Field Id:</i>	SS16	SS17	SS18			
	<i>Depth:</i>	6- In	6- In	6- In			
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jun-29-18 10:00	Jun-29-18 10:05	Jun-29-18 10:10			
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-09-18 15:00	Jul-09-18 07:40	Jul-09-18 07:40			
	<i>Analyzed:</i>	Jul-10-18 02:28	Jul-10-18 11:10	Jul-10-18 11:28			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
Toluene		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
Ethylbenzene		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
m,p-Xylenes		<0.00398 0.00398	<0.0200 0.0200	<0.0200 0.0200			
o-Xylene		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
Total Xylenes		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
Total BTEX		<0.00199 0.00199	<0.0100 0.0100	<0.0100 0.0100			
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-09-18 16:45	Jul-09-18 16:45	Jul-09-18 16:45			
	<i>Analyzed:</i>	Jul-09-18 22:39	Jul-09-18 22:55	Jul-09-18 23:00			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		90.4 4.98	85.7 4.96	101 4.92			
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-09-18 07:00	Jul-09-18 07:00	Jul-09-18 07:00			
	<i>Analyzed:</i>	Jul-09-18 09:08	Jul-09-18 10:25	Jul-09-18 10:45			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Gasoline Range Hydrocarbons (GRO)		<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			
Oil Range Hydrocarbons (ORO)		<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			

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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Version: 1.0%

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS16** Matrix: Soil Date Received: 07.03.18 10.47
 Lab Sample Id: 591176-001 Date Collected: 06.29.18 10.00 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.09.18 16.45 Basis: Wet Weight
 Seq Number: 3055867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	90.4	4.98	mg/kg	07.09.18 22.39		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.09.18 07.00 Basis: Wet Weight
 Seq Number: 3055934

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.09.18 09.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.09.18 09.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.09.18 09.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.09.18 09.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.09.18 09.08	
o-Terphenyl	84-15-1	102	%	70-135	07.09.18 09.08	



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS16**
Lab Sample Id: 591176-001

Matrix: Soil
Date Collected: 06.29.18 10.00

Date Received: 07.03.18 10.47
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.09.18 15.00

Basis: Wet Weight

Seq Number: 3055856

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.10.18 02.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.10.18 02.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	76	%	70-130	07.10.18 02.28		
4-Bromofluorobenzene	460-00-4	71	%	70-130	07.10.18 02.28		



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS17 Matrix: Soil Date Received: 07.03.18 10.47
 Lab Sample Id: 591176-002 Date Collected: 06.29.18 10.05 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.09.18 16.45 Basis: Wet Weight
 Seq Number: 3055867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	85.7	4.96	mg/kg	07.09.18 22.55		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.09.18 07.00 Basis: Wet Weight
 Seq Number: 3055934

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.09.18 10.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.09.18 10.25	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.09.18 10.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.09.18 10.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	07.09.18 10.25	
o-Terphenyl	84-15-1	102	%	70-135	07.09.18 10.25	



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: SS17
Lab Sample Id: 591176-002

Matrix: Soil
Date Collected: 06.29.18 10.05

Date Received: 07.03.18 10.47
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.09.18 07.40

Basis: Wet Weight

Seq Number: 3056046

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	07.10.18 11.10	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
Total BTEX		<0.0100	0.0100	mg/kg	07.10.18 11.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	76	%	70-130	07.10.18 11.10		
1,4-Difluorobenzene	540-36-3	89	%	70-130	07.10.18 11.10		



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS18** Matrix: Soil Date Received: 07.03.18 10.47
 Lab Sample Id: 591176-003 Date Collected: 06.29.18 10.10 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.09.18 16.45 Basis: Wet Weight
 Seq Number: 3055867

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	101	4.92	mg/kg	07.09.18 23.00		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.09.18 07.00 Basis: Wet Weight
 Seq Number: 3055934

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.09.18 10.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.09.18 10.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.09.18 10.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.09.18 10.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	07.09.18 10.45	
o-Terphenyl	84-15-1	102	%	70-135	07.09.18 10.45	



Certificate of Analytical Results 591176



LT Environmental, Inc., Arvada, CO

PLU 320H/012918082

Sample Id: **SS18**
Lab Sample Id: 591176-003

Matrix: Soil
Date Collected: 06.29.18 10.10

Date Received: 07.03.18 10.47
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.09.18 07.40

Basis: Wet Weight

Seq Number: 3056046

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
Toluene	108-88-3	<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
Ethylbenzene	100-41-4	<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
m,p-Xylenes	179601-23-1	<0.0200	0.0200	mg/kg	07.10.18 11.28	U	1
o-Xylene	95-47-6	<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
Total Xylenes	1330-20-7	<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
Total BTEX		<0.0100	0.0100	mg/kg	07.10.18 11.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.10.18 11.28		
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.10.18 11.28		



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 320H/012918082

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055867

MB Sample Id: 7658036-1-BLK

Matrix: Solid

LCS Sample Id: 7658036-1-BKS

Prep Method: E300P

Date Prep: 07.09.18

LCSD Sample Id: 7658036-1-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	269	108	257	103	90-110	5	20	mg/kg	07.09.18 22:28	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055867

Parent Sample Id: 591176-001

Matrix: Soil

MS Sample Id: 591176-001 S

Prep Method: E300P

Date Prep: 07.09.18

MSD Sample Id: 591176-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	90.4	249	355	106	356	107	90-110	0	20	mg/kg	07.09.18 22:44	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055867

Parent Sample Id: 591177-005

Matrix: Soil

MS Sample Id: 591177-005 S

Prep Method: E300P

Date Prep: 07.09.18

MSD Sample Id: 591177-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	558	246	808	102	782	91	90-110	3	20	mg/kg	07.10.18 00:00	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055934

MB Sample Id: 7658090-1-BLK

Matrix: Solid

LCS Sample Id: 7658090-1-BKS

Prep Method: TX1005P

Date Prep: 07.09.18

LCSD Sample Id: 7658090-1-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	970	97	961	96	70-135	1	20	mg/kg	07.09.18 08:29	
Diesel Range Organics (DRO)	<15.0	1000	989	99	979	98	70-135	1	20	mg/kg	07.09.18 08:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		127		122		70-135	%	07.09.18 08:29
o-Terphenyl	104		116		112		70-135	%	07.09.18 08:29

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

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

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

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



LT Environmental, Inc.

PLU 320H/012918082

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055934

Parent Sample Id: 591176-001

Matrix: Soil

MS Sample Id: 591176-001 S

Prep Method: TX1005P

Date Prep: 07.09.18

MSD Sample Id: 591176-001 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	966	97	963	96	70-135	0	20	mg/kg	07.09.18 09:27	
Diesel Range Organics (DRO)	<15.0	999	985	99	998	100	70-135	1	20	mg/kg	07.09.18 09:27	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		120		70-135	%	07.09.18 09:27
o-Terphenyl	107		103		70-135	%	07.09.18 09:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056046

MB Sample Id: 7658167-1-BLK

Matrix: Solid

LCS Sample Id: 7658167-1-BKS

Prep Method: SW5030B

Date Prep: 07.09.18

LCSD Sample Id: 7658167-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.459	92	0.484	97	70-130	5	35	mg/kg	07.10.18 05:08	
Toluene	<0.0100	0.500	0.499	100	0.497	99	70-130	0	35	mg/kg	07.10.18 05:08	
Ethylbenzene	<0.0100	0.500	0.462	92	0.502	100	70-130	8	35	mg/kg	07.10.18 05:08	
m,p-Xylenes	<0.0200	1.00	0.950	95	1.05	105	70-130	10	35	mg/kg	07.10.18 05:08	
o-Xylene	<0.0100	0.500	0.451	90	0.486	97	70-130	7	35	mg/kg	07.10.18 05:08	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		98		70-130	%	07.10.18 05:08
4-Bromofluorobenzene	95		92		91		70-130	%	07.10.18 05:08

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055856

MB Sample Id: 7658027-1-BLK

Matrix: Solid

LCS Sample Id: 7658027-1-BKS

Prep Method: SW5030B

Date Prep: 07.09.18

LCSD Sample Id: 7658027-1-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	0.0927	93	0.102	102	70-130	10	35	mg/kg	07.09.18 20:10	
Toluene	<0.00200	0.0998	0.101	101	0.106	106	70-130	5	35	mg/kg	07.09.18 20:10	
Ethylbenzene	<0.00200	0.0998	0.0928	93	0.103	103	70-130	10	35	mg/kg	07.09.18 20:10	
m,p-Xylenes	<0.00399	0.200	0.199	100	0.214	106	70-130	7	35	mg/kg	07.09.18 20:10	
o-Xylene	<0.00200	0.0998	0.0941	94	0.104	104	70-130	10	35	mg/kg	07.09.18 20:10	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		117		116		70-130	%	07.09.18 20:10
4-Bromofluorobenzene	71		84		96		70-130	%	07.09.18 20:10

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 320H/012918082

Analytical Method: BTEX by EPA 8021B

Seq Number: 3056046

Parent Sample Id: 591451-001

Matrix: Soil

MS Sample Id: 591451-001 S

Prep Method: SW5030B

Date Prep: 07.09.18

MSD Sample Id: 591451-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.0100	0.500	0.291	58	0.354	71	70-130	20	35	mg/kg	07.10.18 05:44	X
Toluene	<0.0100	0.500	0.229	46	0.330	66	70-130	36	35	mg/kg	07.10.18 05:44	XF
Ethylbenzene	<0.0100	0.500	0.167	33	0.287	57	70-130	53	35	mg/kg	07.10.18 05:44	XF
m,p-Xylenes	<0.0200	1.00	0.331	33	0.560	56	70-130	51	35	mg/kg	07.10.18 05:44	XF
o-Xylene	<0.0100	0.500	0.157	31	0.287	57	70-130	59	35	mg/kg	07.10.18 05:44	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	124		99		70-130	%	07.10.18 05:44
4-Bromofluorobenzene	88		91		70-130	%	07.10.18 05:44

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055856

Parent Sample Id: 591178-002

Matrix: Soil

MS Sample Id: 591178-002 S

Prep Method: SW5030B

Date Prep: 07.09.18

MSD Sample Id: 591178-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0805	81	0.0774	77	70-130	4	35	mg/kg	07.09.18 20:46	
Toluene	<0.00200	0.100	0.0771	77	0.0742	73	70-130	4	35	mg/kg	07.09.18 20:46	
Ethylbenzene	<0.00200	0.100	0.0640	64	0.0644	64	70-130	1	35	mg/kg	07.09.18 20:46	X
m,p-Xylenes	<0.00401	0.200	0.126	63	0.131	65	70-130	4	35	mg/kg	07.09.18 20:46	X
o-Xylene	<0.00200	0.100	0.0635	64	0.0617	61	70-130	3	35	mg/kg	07.09.18 20:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	124		88		70-130	%	07.09.18 20:46
4-Bromofluorobenzene	101		95		70-130	%	07.09.18 20:46

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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Dallas, TX (214) 902-0300

El Paso, TX (915) 585-3443
Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge, LA (832) 712-8143

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

Page 1 Of 1

CHAIN OF CUSTODY

Revision 2016.1

Client / Reporting Information						Project Information							Analytical Information								Matrix Codes										
Company Name / Branch: LT Environmental - Permian Office						Project Name/Number: PLU 330 H 1012918082																									
Company Address: 3300 N "A" St, Bldg 2, Unit 103 Midland TX						Project Location: NM																									
Email: Abaker@ltenv.com 432.704.5178						Invoice To: XTO Energy - Uyle Lithium																									
Phone No:																															
Project Contact: Adrian Baker						PO Number: 22P-3888, 3563																									
Samplers's Name: Daniel Thomas																															
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	BTEX TPH Chloride																
1	SS16	6"	6/18/20	5:01	↓	1									X	X	X														
2	SS17	↓	↓	10:05	↓	↓																									
3	SS18	↓	↓	10:10	↓	↓																									
4																															
5																															
6																															
7																															
8																															
9																															
10																															
Turnaround Time (Business days)						Data Deliverable Information										Notes:															
☐ Same Day TAT						☐ Level II Std QC										☐ Level IV (Full Data Pkg raw date)															
☐ Next Day EMERGENCY						☐ Level III Std QC+ Forms										☐ TRRP Level IV															
☐ 2 Day EMERGENCY						☐ Contract TAT										☐ Level 3 (CLP Forms)								☐ UST / RG-411							
☐ 3 Day EMERGENCY						☒ Standard										☐ Level II Report with TRRP checklist															
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																FED-EX / UPS Tracking # 772619259581															
Relinquished by Sampler						Date Time: 6/18/20						Received By: [Signature]						Date Time: 7/31/18						Received By: [Signature]							
Relinquished by:						Date Time:						Received By:						Date Time:						Received By:							
Relinquished by:						Date Time:						Received By:						Date Time:						Received By:							
Retained by:						Date Time:						Received By:						Date Time:						Received By:							
On Use						Cooler Temp.						Thermo Corr. Factor																			

ORIGIN ID:MAFA	(806) 794-1296	SHIP DATE: 02JUL18
XENCO		ACTWGT: 30.00 LB
XENCO		CAD: 101813706/NET3980
1211 W. FLORIDA AVE		DIMS: 26x14x14 IN
MIDLAND, TX 79701		BILL RECIPIENT
UNITED STATES US		
TO XENCO		
XENCO		
1211 W. FLORIDA AVE		
MIDLAND TX 79701		
(806) 794-1296	REF:	
INV:	DEPT:	
PO:		

TRK# 7726 1925 9581

0201

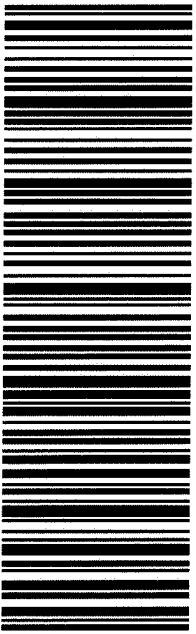
41 MAFA

TX-US LBB

79701

TUE - 03 JUL 3:00P

STANDARD OVERNIGHT





J181118012801uz

552J26532IDCA5

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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Client: LT Environmental, Inc.

Date/ Time Received: 07/03/2018 10:47:00 AM

Work Order #: 591176

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)?	3.2
#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: 07/03/2018

Checklist reviewed by:

Jessica Kramer

Date: 07/03/2018

Analytical Report 578591

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU #320 2RP-3769

14-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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

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

Xenco-Atlanta (LELAP Lab ID #04176)



14-MAR-18

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

Reference: XENCO Report No(s): **578591**
PLU #320 2RP-3769
Project Address: 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) 578591. 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. 578591 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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**Sample Cross Reference 578591****LT Environmental, Inc., Arvada, CO**

PLU #320 2RP-3769

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	03-06-18 11:40	6 In	578591-001
SS2	S	03-06-18 11:45	6 In	578591-002
SS3	S	03-06-18 11:55	6 In	578591-003
SS4	S	03-06-18 12:00	6 In	578591-004
SS5	S	03-06-18 12:10	6 In	578591-005



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU #320 2RP-3769

Project ID:

Work Order Number(s): 578591

Report Date: 14-MAR-18

Date Received: 03/07/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3043356 BTEX by EPA 8021B

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

Batch: LBA-3043503 BTEX by EPA 8021B

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



Certificate of Analysis Summary 578591

LT Environmental, Inc., Arvada, CO

Project Name: PLU #320 2RP-3769

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Mar-07-18 03:08 pm

Report Date: 14-MAR-18

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	578591-001	578591-002	578591-003	578591-004	578591-005	
	Field Id:	SS1	SS2	SS3	SS4	SS5	
	Depth:	6- In	6- In	6- In	6- In	6- In	
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Mar-06-18 11:40	Mar-06-18 11:45	Mar-06-18 11:55	Mar-06-18 12:00	Mar-06-18 12:10	
BTEX by EPA 8021B	Extracted:	Mar-10-18 12:00	Mar-10-18 12:00	Mar-12-18 08:00	Mar-10-18 12:00	Mar-10-18 12:00	
	Analyzed:	Mar-10-18 14:23	Mar-10-18 14:42	Mar-12-18 12:00	Mar-10-18 15:21	Mar-10-18 15:40	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00202 0.00202	<0.00200 0.00200	<0.0198 0.0198	<0.00200 0.00200	<0.00201 0.00201	
Toluene		0.237 0.00202	<0.00200 0.00200	0.436 0.0198	<0.00200 0.00200	<0.00201 0.00201	
Ethylbenzene		0.0291 0.00202	<0.00200 0.00200	1.06 0.0198	<0.00200 0.00200	0.00395 0.00201	
m,p-Xylenes		0.107 0.00404	<0.00401 0.00401	2.33 0.0397	0.0246 0.00399	0.00681 0.00402	
o-Xylene		<0.00202 0.00202	<0.00200 0.00200	1.83 0.0198	<0.00200 0.00200	<0.00201 0.00201	
Total Xylenes		0.107 0.00202	<0.00200 0.00200	4.16 0.0198	0.0246 0.00200	0.00681 0.00201	
Total BTEX		0.373 0.00202	<0.00200 0.00200	5.66 0.0198	0.0246 0.00200	0.0108 0.00201	
Inorganic Anions by EPA 300	Extracted:	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	
	Analyzed:	Mar-13-18 08:17	Mar-13-18 10:53	Mar-13-18 10:58	Mar-13-18 07:51	Mar-13-18 11:03	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		103 4.97	476 24.7	191 25.0	270 4.94	740 4.95	
TPH by SW8015 Mod	Extracted:	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	
	Analyzed:	Mar-12-18 06:27	Mar-12-18 06:47	Mar-12-18 07:06	Mar-12-18 07:25	Mar-12-18 08:43	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		642 74.9	<15.0 15.0	2440 74.8	<150 150	<150 150	
Diesel Range Organics (DRO)		5880 74.9	43.4 15.0	6650 74.8	10900 150	21200 150	
Oil Range Hydrocarbons (ORO)		841 74.9	<15.0 15.0	951 74.8	2780 150	5630 150	
Total TPH		7360 74.9	43.4 15.0	10000 74.8	13700 150	26800 150	

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

Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS1 Matrix: Soil Date Received: 03.07.18 15.08
 Lab Sample Id: 578591-001 Date Collected: 03.06.18 11.40 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.12.18 15.00 Basis: Wet Weight
 Seq Number: 3043628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	103	4.97	mg/kg	03.13.18 08.17		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.10.18 16.00 Basis: Wet Weight
 Seq Number: 3043517

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	642	74.9	mg/kg	03.12.18 06.27		5
Diesel Range Organics (DRO)	C10C28DRO	5880	74.9	mg/kg	03.12.18 06.27		5
Oil Range Hydrocarbons (ORO)	PHCG2835	841	74.9	mg/kg	03.12.18 06.27		5
Total TPH	PHC635	7360	74.9	mg/kg	03.12.18 06.27		5
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-135	03.12.18 06.27		
o-Terphenyl	84-15-1	103	%	70-135	03.12.18 06.27		



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS1
Lab Sample Id: 578591-001

Matrix: Soil
Date Collected: 03.06.18 11.40

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.10.18 14.23	U	1
Toluene	108-88-3	0.237	0.00202	mg/kg	03.10.18 14.23		1
Ethylbenzene	100-41-4	0.0291	0.00202	mg/kg	03.10.18 14.23		1
m,p-Xylenes	179601-23-1	0.107	0.00404	mg/kg	03.10.18 14.23		1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.18 14.23	U	1
Total Xylenes	1330-20-7	0.107	0.00202	mg/kg	03.10.18 14.23		1
Total BTEX		0.373	0.00202	mg/kg	03.10.18 14.23		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	124		%	70-130	03.10.18 14.23	
1,4-Difluorobenzene	540-36-3	76		%	70-130	03.10.18 14.23	



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS2
Lab Sample Id: 578591-002

Matrix: Soil
Date Collected: 03.06.18 11.45

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043628

Date Prep: 03.12.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	476	24.7	mg/kg	03.13.18 10.53		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3043517

Date Prep: 03.10.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.18 06.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	43.4	15.0	mg/kg	03.12.18 06.47		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	03.12.18 06.47	U	1
Total TPH	PHC635	43.4	15.0	mg/kg	03.12.18 06.47		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.12.18 06.47	
o-Terphenyl	84-15-1	104	%	70-135	03.12.18 06.47	



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS2
Lab Sample Id: 578591-002

Matrix: Soil
Date Collected: 03.06.18 11.45

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	03.10.18 14.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.10.18 14.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	03.10.18 14.42		
1,4-Difluorobenzene	540-36-3	83	%	70-130	03.10.18 14.42		



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS3
Lab Sample Id: 578591-003

Matrix: Soil
Date Collected: 03.06.18 11.55

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043628

Date Prep: 03.12.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	191	25.0	mg/kg	03.13.18 10.58		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3043517

Date Prep: 03.10.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	2440	74.8	mg/kg	03.12.18 07.06		5
Diesel Range Organics (DRO)	C10C28DRO	6650	74.8	mg/kg	03.12.18 07.06		5
Oil Range Hydrocarbons (ORO)	PHCG2835	951	74.8	mg/kg	03.12.18 07.06		5
Total TPH	PHC635	10000	74.8	mg/kg	03.12.18 07.06		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	03.12.18 07.06	
o-Terphenyl	84-15-1	88	%	70-135	03.12.18 07.06	



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS3
Lab Sample Id: 578591-003

Matrix: Soil
Date Collected: 03.06.18 11.55

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.12.18 08.00

Basis: Wet Weight

Seq Number: 3043503

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.0198	0.0198	mg/kg	03.12.18 12.00	U	10
Toluene	108-88-3	0.436	0.0198	mg/kg	03.12.18 12.00		10
Ethylbenzene	100-41-4	1.06	0.0198	mg/kg	03.12.18 12.00		10
m,p-Xylenes	179601-23-1	2.33	0.0397	mg/kg	03.12.18 12.00		10
o-Xylene	95-47-6	1.83	0.0198	mg/kg	03.12.18 12.00		10
Total Xylenes	1330-20-7	4.16	0.0198	mg/kg	03.12.18 12.00		10
Total BTEX		5.66	0.0198	mg/kg	03.12.18 12.00		10
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.12.18 12.00		
1,4-Difluorobenzene	540-36-3	71	%	70-130	03.12.18 12.00		



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: **SS4** Matrix: **Soil** Date Received: 03.07.18 15.08
 Lab Sample Id: 578591-004 Date Collected: 03.06.18 12.00 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **OJS** % Moisture:
 Analyst: **OJS** Date Prep: 03.12.18 15.00 Basis: **Wet Weight**
 Seq Number: 3043628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	270	4.94	mg/kg	03.13.18 07.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 03.10.18 16.00 Basis: **Wet Weight**
 Seq Number: 3043517

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<150	150	mg/kg	03.12.18 07.25	U	10
Diesel Range Organics (DRO)	C10C28DRO	10900	150	mg/kg	03.12.18 07.25		10
Oil Range Hydrocarbons (ORO)	PHCG2835	2780	150	mg/kg	03.12.18 07.25		10
Total TPH	PHC635	13700	150	mg/kg	03.12.18 07.25		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	03.12.18 07.25	
o-Terphenyl	84-15-1	96	%	70-135	03.12.18 07.25	



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS4
Lab Sample Id: 578591-004

Matrix: Soil
Date Collected: 03.06.18 12.00

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.10.18 15.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.10.18 15.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.10.18 15.21	U	1
m,p-Xylenes	179601-23-1	0.0246	0.00399	mg/kg	03.10.18 15.21		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.10.18 15.21	U	1
Total Xylenes	1330-20-7	0.0246	0.00200	mg/kg	03.10.18 15.21		1
Total BTEX		0.0246	0.00200	mg/kg	03.10.18 15.21		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	84	%	70-130	03.10.18 15.21		
4-Bromofluorobenzene	460-00-4	113	%	70-130	03.10.18 15.21		



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS5
Lab Sample Id: 578591-005

Matrix: Soil
Date Collected: 03.06.18 12.10

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043628

Date Prep: 03.12.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	740	4.95	mg/kg	03.13.18 11.03		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3043517

Date Prep: 03.10.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<150	150	mg/kg	03.12.18 08.43	U	10
Diesel Range Organics (DRO)	C10C28DRO	21200	150	mg/kg	03.12.18 08.43		10
Oil Range Hydrocarbons (ORO)	PHCG2835	5630	150	mg/kg	03.12.18 08.43		10
Total TPH	PHC635	26800	150	mg/kg	03.12.18 08.43		10

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	76	%	70-135	03.12.18 08.43	
o-Terphenyl	84-15-1	87	%	70-135	03.12.18 08.43	



Certificate of Analytical Results 578591



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3769

Sample Id: SS5
Lab Sample Id: 578591-005

Matrix: Soil
Date Collected: 03.06.18 12.10

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.18 15.40	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.18 15.40	U	1
Ethylbenzene	100-41-4	0.00395	0.00201	mg/kg	03.10.18 15.40		1
m,p-Xylenes	179601-23-1	0.00681	0.00402	mg/kg	03.10.18 15.40		1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.18 15.40	U	1
Total Xylenes	1330-20-7	0.00681	0.00201	mg/kg	03.10.18 15.40		1
Total BTEX		0.0108	0.00201	mg/kg	03.10.18 15.40		1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79		%	70-130	03.10.18 15.40	
1,4-Difluorobenzene	540-36-3	80		%	70-130	03.10.18 15.40	



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 #320 2RP-3769

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

MB Sample Id: 7640640-1-BLK

Matrix: Solid

LCS Sample Id: 7640640-1-BKS

Prep Method: E300P

Date Prep: 03.12.18

LCSD Sample Id: 7640640-1-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	240	96	254	102	90-110	6	20	mg/kg	03.13.18 07:33	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

Parent Sample Id: 578591-004

Matrix: Soil

MS Sample Id: 578591-004 S

Prep Method: E300P

Date Prep: 03.12.18

MSD Sample Id: 578591-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	270	247	533	106	529	105	90-110	1	20	mg/kg	03.13.18 08:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

Parent Sample Id: 578593-001

Matrix: Soil

MS Sample Id: 578593-001 S

Prep Method: E300P

Date Prep: 03.12.18

MSD Sample Id: 578593-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	263	105	261	104	90-110	1	20	mg/kg	03.13.18 19:00	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043517

MB Sample Id: 7640555-1-BLK

Matrix: Solid

LCS Sample Id: 7640555-1-BKS

Prep Method: TX1005P

Date Prep: 03.10.18

LCSD Sample Id: 7640555-1-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	939	94	1050	105	70-135	11	35	mg/kg	03.11.18 11:45	
Diesel Range Organics (DRO)	<15.0	1000	830	83	930	93	70-135	11	35	mg/kg	03.11.18 11:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		85		107		70-135	%	03.11.18 11:45
o-Terphenyl	91		85		99		70-135	%	03.11.18 11:45

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$

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 #320 2RP-3769

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043517

Parent Sample Id: 578121-001

Matrix: Soil

MS Sample Id: 578121-001 S

Prep Method: TX1005P

Date Prep: 03.10.18

MSD Sample Id: 578121-001 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	893	89	877	88	70-135	2	35	mg/kg	03.11.18 12:49	
Diesel Range Organics (DRO)	31.1	999	802	77	801	77	70-135	0	35	mg/kg	03.11.18 12:49	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		96		70-135	%	03.11.18 12:49
o-Terphenyl	84		81		70-135	%	03.11.18 12:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043356

MB Sample Id: 7640532-1-BLK

Matrix: Solid

LCS Sample Id: 7640532-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.18

LCSD Sample Id: 7640532-1-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	0.0902	90	0.0860	86	70-130	5	35	mg/kg	03.10.18 12:07	
Toluene	<0.00200	0.0998	0.0963	96	0.0922	92	70-130	4	35	mg/kg	03.10.18 12:07	
Ethylbenzene	<0.00200	0.0998	0.110	110	0.105	105	70-130	5	35	mg/kg	03.10.18 12:07	
m,p-Xylenes	<0.00399	0.200	0.217	109	0.207	104	70-130	5	35	mg/kg	03.10.18 12:07	
o-Xylene	<0.00200	0.0998	0.106	106	0.101	101	70-130	5	35	mg/kg	03.10.18 12:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		92		86		70-130	%	03.10.18 12:07
4-Bromofluorobenzene	106		110		113		70-130	%	03.10.18 12:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043503

MB Sample Id: 7640672-1-BLK

Matrix: Solid

LCS Sample Id: 7640672-1-BKS

Prep Method: SW5030B

Date Prep: 03.12.18

LCSD Sample Id: 7640672-1-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	0.0909	90	0.0883	88	70-130	3	35	mg/kg	03.12.18 06:55	
Toluene	<0.00202	0.101	0.0972	96	0.0942	94	70-130	3	35	mg/kg	03.12.18 06:55	
Ethylbenzene	<0.00202	0.101	0.111	110	0.109	109	70-130	2	35	mg/kg	03.12.18 06:55	
m,p-Xylenes	<0.00403	0.202	0.219	108	0.214	107	70-130	2	35	mg/kg	03.12.18 06:55	
o-Xylene	<0.00202	0.101	0.106	105	0.105	105	70-130	1	35	mg/kg	03.12.18 06:55	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		86		84		70-130	%	03.12.18 06:55
4-Bromofluorobenzene	110		119		118		70-130	%	03.12.18 06:55

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$

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 #320 2RP-3769

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043356

Parent Sample Id: 578592-001

Matrix: Soil

MS Sample Id: 578592-001 S

Prep Method: SW5030B

Date Prep: 03.10.18

MSD Sample Id: 578592-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0443	44	0.0412	41	70-130	7	35	mg/kg	03.10.18 12:46	X
Toluene	<0.00202	0.101	0.0382	38	0.0279	28	70-130	31	35	mg/kg	03.10.18 12:46	X
Ethylbenzene	<0.00202	0.101	0.0304	30	0.0219	22	70-130	33	35	mg/kg	03.10.18 12:46	X
m,p-Xylenes	<0.00404	0.202	0.0650	32	0.0364	18	70-130	56	35	mg/kg	03.10.18 12:46	XF
o-Xylene	<0.00202	0.101	0.0301	30	0.0221	22	70-130	31	35	mg/kg	03.10.18 12:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	77		110		70-130	%	03.10.18 12:46
4-Bromofluorobenzene	72		116		70-130	%	03.10.18 12:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043503

Parent Sample Id: 578649-001

Matrix: Soil

MS Sample Id: 578649-001 S

Prep Method: SW5030B

Date Prep: 03.12.18

MSD Sample Id: 578649-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0584	59	0.0656	66	70-130	12	35	mg/kg	03.12.18 07:34	X
Toluene	<0.00199	0.0996	0.0607	61	0.0664	66	70-130	9	35	mg/kg	03.12.18 07:34	X
Ethylbenzene	<0.00199	0.0996	0.0666	67	0.0704	70	70-130	6	35	mg/kg	03.12.18 07:34	X
m,p-Xylenes	<0.00398	0.199	0.131	66	0.138	69	70-130	5	35	mg/kg	03.12.18 07:34	X
o-Xylene	<0.00199	0.0996	0.0651	65	0.0709	71	70-130	9	35	mg/kg	03.12.18 07:34	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	83		87		70-130	%	03.12.18 07:34
4-Bromofluorobenzene	120		129		70-130	%	03.12.18 07:34

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * | (C - E) / (C + E) |$
 $[D] = 100 * (C) / [B]$

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

Page 1 of 1

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

www.xenco.com

Phoenix, Arizona (480-355-0900)

Sample for Air labeled 6-10

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes							
Company Name / Branch: LTE/Permian				Project Name/Number: PLU #320 2RP-37169															
Company Address: 3300 N. A Street Bldg 1 Suite 103 Midland TX 79705				Project Location: NM															
Email: abaker@ltenv.com				Invoice To: NR															
Phone No: 432-704-5178				PO Number: 30-015-39810															
Project Contact: Adrian Baker																			
Sampler's Name																			
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	BTEX EPA Method 8021		TPH EPA Method 8015 (DRO GRO MRO)		Chloride EPA Method 300.1	
1	SS1	6"	3/4/16	1140	S	1									X	X	X		
2	SS2														X	X	X		
3	SS3			1145											X	X	X		
4	SS4			1200											X	X	X		
5	SS5			1210											X	X	X		
6																			
7																			
8																			
9																			
10																			
Turnaround Time (Business days)																			
Data Deliverable Information																			
☐ Same Day TAT ☐ Next Day EMERGENCY ☐ 2 Day EMERGENCY ☐ 3 Day EMERGENCY				☐ 5 Day TAT ☐ 7 Day TAT ☐ Contract TAT ☐ Sid turn around				☐ Level II Std QC ☐ Level III Std QC+ Forms ☐ Level 3 (CLP Forms) ☐ TRRP Checklist				☐ Level IV (Full Data Plg /raw data) ☐ TRRP Level IV ☐ UST / RG-411							
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																			
Relinquished by Sampler:				Date Time:				Received By:				Date Time:				Received By:			
1 Relinquished by: <i>Adrian Baker</i>				3/6/16 1530				1 <i>Adrian Baker</i>				3/6/16 1900				2 <i>Adrian Baker</i>			
3 Relinquished by: <i>Adrian Baker</i>				3/7/16 1550				3 <i>Adrian Baker</i>				3/7/16 1508				4 <i>Adrian Baker</i>			
Relinquished by:				Date Time:				Received By:				Date Time:				Received By:			
5																			
FED-EX / UPS: Tracking #																			
Temp: <i>2.6</i>				IR ID: <i>R-8</i>															
CF: (0-6; -0.2°C)																			
(6-23; +0.2°C)																			
Corrected Temp: <i>2.4</i>																			
On Ice				Cooler Temp.				Thermo. Corr. Factor											

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.



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/07/2018 03:08:00 PM

Work Order #: 578591

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)?	2.4	
#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?	No	TPH received in bulk jars
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Connie Hernandez

Date: 03/08/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/08/2018

Analytical Report 590704

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 320 H

012318082

09-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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)



09-JUL-18

Project Manager: **Adrian Baker**

LT Environmental, Inc.

4600 W. 60th Avenue

Arvada, CO 80003

Reference: XENCO Report No(s): **590704**

PLU 320 H

Project Address: 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) 590704. 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. 590704 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 590704****LT Environmental, Inc., Arvada, CO**

PLU 320 H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW7	S	06-26-18 14:15	3 ft	590704-001
SW8	S	06-26-18 14:20	3 ft	590704-002
SW9	S	06-26-18 14:25	3 ft	590704-003
SW10	S	06-26-18 14:30	3 ft	590704-004
SW11	S	06-26-18 14:35	3 ft	590704-005
SW12	S	06-26-18 14:40	3 ft	590704-006
SW13	S	06-26-18 14:45	4 ft	590704-007
SW14	S	06-26-18 14:50	4 ft	590704-008
SW15	S	06-26-18 14:55	4 ft	590704-009
SW16	S	06-26-18 15:00	4 ft	590704-010
SW17	S	06-26-18 15:05	4 ft	590704-011



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320 H

Project ID: 012318082

Work Order Number(s): 590704

Report Date: 09-JUL-18

Date Received: 06/28/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055548 BTEX by EPA 8021B

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

Batch: LBA-3055640 BTEX by EPA 8021B

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



Certificate of Analysis Summary 590704

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320 H

Project Id: 012318082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am
Report Date: 09-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	590704-001	590704-002	590704-003	590704-004	590704-005	590704-006
	<i>Field Id:</i>	SW7	SW8	SW9	SW10	SW11	SW12
	<i>Depth:</i>	3- ft	3- ft	3- ft	3- ft	3- ft	3- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-26-18 14:15	Jun-26-18 14:20	Jun-26-18 14:25	Jun-26-18 14:30	Jun-26-18 14:35	Jun-26-18 14:40
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00
	<i>Analyzed:</i>	Jul-05-18 13:12	Jul-05-18 14:07	Jul-05-18 14:23	Jul-05-18 14:41	Jul-05-18 15:00	Jul-05-18 15:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402	<0.00401 0.00401	<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30
	<i>Analyzed:</i>	Jul-03-18 11:49	Jul-03-18 11:54	Jul-03-18 12:10	Jul-03-18 12:00	Jul-03-18 12:05	Jul-03-18 12:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1640 25.0	15.8 4.95	436 5.00	3280 25.0	1570 25.0	1360 25.0
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00
	<i>Analyzed:</i>	Jul-06-18 11:58	Jul-06-18 12:58	Jul-06-18 13:18	Jul-06-18 13:38	Jul-06-18 13:58	Jul-06-18 14:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg 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	84.3 15.0	<15.0 15.0	226 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	16.8 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	84.3 15.0	<15.0 15.0	243 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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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 590704

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320 H

Project Id: 012318082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am
Report Date: 09-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	590704-007	590704-008	590704-009	590704-010	590704-011	
	<i>Field Id:</i>	SW13	SW14	SW15	SW16	SW17	
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Jun-26-18 14:45	Jun-26-18 14:50	Jun-26-18 14:55	Jun-26-18 15:00	Jun-26-18 15:05	
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-05-18 08:00	Jul-05-18 08:00	Jul-06-18 11:30	Jul-06-18 11:30	Jul-06-18 11:30	
	<i>Analyzed:</i>	Jul-05-18 15:38	Jul-05-18 15:57	Jul-06-18 13:03	Jul-06-18 13:21	Jul-06-18 14:15	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	0.00835 0.00200	
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00398 0.00398	<0.00397 0.00397	0.0228 0.00401	
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	0.0111 0.00200	
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	0.0339 0.00200	
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	0.0423 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	
	<i>Analyzed:</i>	Jul-03-18 12:32	Jul-03-18 12:48	Jul-03-18 12:59	Jul-03-18 13:05	Jul-03-18 13:10	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		94.4 4.95	479 4.95	35.8 5.00	158 5.00	131 4.98	
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	Jul-06-18 10:00	
	<i>Analyzed:</i>	Jul-06-18 14:38	Jul-06-18 14:58	Jul-06-18 15:18	Jul-06-18 15:39	Jul-06-18 16:39	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	19.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0	62.2 15.0	57.4 14.9	36.2 15.0	1390 15.0	
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0	45.9 15.0	
Total TPH		<15.0 15.0	62.2 15.0	57.4 14.9	36.2 15.0	1450 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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Version: 1.9%

Jessica Kramer
Project Assistant



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW7** Matrix: **Soil** Date Received: 06.28.18 10.10
 Lab Sample Id: 590704-001 Date Collected: 06.26.18 14.15 Sample Depth: 3 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 07.03.18 09.30 Basis: **Wet Weight**
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1640	25.0	mg/kg	07.03.18 11.49		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 07.06.18 10.00 Basis: **Wet Weight**
 Seq Number: 3055781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 11.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.18 11.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 11.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.18 11.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	07.06.18 11.58		
o-Terphenyl	84-15-1	90	%	70-135	07.06.18 11.58		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW7**
Lab Sample Id: 590704-001

Matrix: **Soil**
Date Collected: 06.26.18 14.15

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: **ALJ**

% Moisture:

Analyst: **ALJ**

Date Prep: 07.05.18 08.00

Basis: **Wet Weight**

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.05.18 13.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.05.18 13.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.05.18 13.12		
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.05.18 13.12		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW8**
Lab Sample Id: 590704-002

Matrix: Soil
Date Collected: 06.26.18 14.20

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Prep Method: E300P
% Moisture:
Date Prep: 07.03.18 09.30
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.8	4.95	mg/kg	07.03.18 11.54		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Prep Method: TX1005P
% Moisture:
Date Prep: 07.06.18 10.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 12.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.18 12.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 12.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.18 12.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	90	%	70-135	07.06.18 12.58		
o-Terphenyl	84-15-1	95	%	70-135	07.06.18 12.58		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW8**

Matrix: Soil

Date Received: 06.28.18 10.10

Lab Sample Id: 590704-002

Date Collected: 06.26.18 14.20

Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.05.18 14.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.05.18 14.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	129	%	70-130	07.05.18 14.07		
4-Bromofluorobenzene	460-00-4	107	%	70-130	07.05.18 14.07		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW9**
Lab Sample Id: 590704-003

Matrix: Soil
Date Collected: 06.26.18 14.25

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Prep Method: E300P
% Moisture:
Date Prep: 07.03.18 09.30
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	436	5.00	mg/kg	07.03.18 12.10		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Prep Method: TX1005P
% Moisture:
Date Prep: 07.06.18 10.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 13.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.18 13.18	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 13.18	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.18 13.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	07.06.18 13.18		
o-Terphenyl	84-15-1	94	%	70-135	07.06.18 13.18		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW9**

Matrix: Soil

Date Received: 06.28.18 10.10

Lab Sample Id: 590704-003

Date Collected: 06.26.18 14.25

Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.05.18 14.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.05.18 14.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	84	%	70-130	07.05.18 14.23		
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.05.18 14.23		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW10**
Lab Sample Id: 590704-004

Matrix: Soil
Date Collected: 06.26.18 14.30

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Prep Method: E300P
% Moisture:
Date Prep: 07.03.18 09.30
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3280	25.0	mg/kg	07.03.18 12.00		5

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Prep Method: TX1005P
% Moisture:
Date Prep: 07.06.18 10.00
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 13.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	84.3	15.0	mg/kg	07.06.18 13.38		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 13.38	U	1
Total TPH	PHC635	84.3	15.0	mg/kg	07.06.18 13.38		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	07.06.18 13.38		
o-Terphenyl	84-15-1	95	%	70-135	07.06.18 13.38		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW10**
Lab Sample Id: 590704-004

Matrix: Soil
Date Collected: 06.26.18 14.30

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.05.18 14.41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.05.18 14.41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	77	%	70-130	07.05.18 14.41		
1,4-Difluorobenzene	540-36-3	93	%	70-130	07.05.18 14.41		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW11**
Lab Sample Id: 590704-005

Matrix: Soil
Date Collected: 06.26.18 14.35

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055446

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Date Prep: 07.03.18 09.30

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1570	25.0	mg/kg	07.03.18 12.05		5

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055781

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Date Prep: 07.06.18 10.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 13.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.18 13.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 13.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.18 13.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	87	%	70-135	07.06.18 13.58		
o-Terphenyl	84-15-1	92	%	70-135	07.06.18 13.58		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW11**
Lab Sample Id: 590704-005

Matrix: Soil
Date Collected: 06.26.18 14.35

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.05.18 15.00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.05.18 15.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	07.05.18 15.00		
4-Bromofluorobenzene	460-00-4	92	%	70-130	07.05.18 15.00		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW12**
Lab Sample Id: 590704-006

Matrix: Soil
Date Collected: 06.26.18 14.40

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Date Prep: 07.03.18 09.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1360	25.0	mg/kg	07.03.18 12.27		5

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Date Prep: 07.06.18 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 14.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	226	15.0	mg/kg	07.06.18 14.18		1
Oil Range Hydrocarbons (ORO)	PHCG2835	16.8	15.0	mg/kg	07.06.18 14.18		1
Total TPH	PHC635	243	15.0	mg/kg	07.06.18 14.18		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	89	%	70-135	07.06.18 14.18		
o-Terphenyl	84-15-1	100	%	70-135	07.06.18 14.18		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW12**
Lab Sample Id: 590704-006

Matrix: Soil
Date Collected: 06.26.18 14.40

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.05.18 15.18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.05.18 15.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.05.18 15.18		
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.05.18 15.18		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW13**
Lab Sample Id: 590704-007

Matrix: Soil
Date Collected: 06.26.18 14.45

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Date Prep: 07.03.18 09.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	94.4	4.95	mg/kg	07.03.18 12.32		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Date Prep: 07.06.18 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 14.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.06.18 14.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 14.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.06.18 14.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	86	%	70-135	07.06.18 14.38		
o-Terphenyl	84-15-1	88	%	70-135	07.06.18 14.38		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW13**
Lab Sample Id: 590704-007

Matrix: Soil
Date Collected: 06.26.18 14.45

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.05.18 15.38	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.05.18 15.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	07.05.18 15.38		
4-Bromofluorobenzene	460-00-4	72	%	70-130	07.05.18 15.38		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW14**
Lab Sample Id: 590704-008

Matrix: Soil
Date Collected: 06.26.18 14.50

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Date Prep: 07.03.18 09.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	479	4.95	mg/kg	07.03.18 12.48		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Date Prep: 07.06.18 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 14.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	62.2	15.0	mg/kg	07.06.18 14.58		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 14.58	U	1
Total TPH	PHC635	62.2	15.0	mg/kg	07.06.18 14.58		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	82	%	70-135	07.06.18 14.58		
o-Terphenyl	84-15-1	85	%	70-135	07.06.18 14.58		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW14**
Lab Sample Id: 590704-008

Matrix: Soil
Date Collected: 06.26.18 14.50

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 08.00

Basis: Wet Weight

Seq Number: 3055548

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.05.18 15.57	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.05.18 15.57	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	88		%	70-130	07.05.18 15.57	
1,4-Difluorobenzene	540-36-3	108		%	70-130	07.05.18 15.57	



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW15**
Lab Sample Id: 590704-009

Matrix: Soil
Date Collected: 06.26.18 14.55

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300
Tech: SCM
Analyst: SCM
Seq Number: 3055446

Date Prep: 07.03.18 09.30

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	35.8	5.00	mg/kg	07.03.18 12.59		1

Analytical Method: TPH by SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3055781

Date Prep: 07.06.18 10.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.06.18 15.18	U	1
Diesel Range Organics (DRO)	C10C28DRO	57.4	14.9	mg/kg	07.06.18 15.18		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.06.18 15.18	U	1
Total TPH	PHC635	57.4	14.9	mg/kg	07.06.18 15.18		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	07.06.18 15.18		
o-Terphenyl	84-15-1	93	%	70-135	07.06.18 15.18		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW15**
Lab Sample Id: 590704-009

Matrix: Soil
Date Collected: 06.26.18 14.55

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.18 11.30

Basis: Wet Weight

Seq Number: 3055640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.06.18 13.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.06.18 13.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	87	%	70-130	07.06.18 13.03		
1,4-Difluorobenzene	540-36-3	114	%	70-130	07.06.18 13.03		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW16** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590704-010 Date Collected: 06.26.18 15.00 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	158	5.00	mg/kg	07.03.18 13.05		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.06.18 10.00 Basis: Wet Weight
 Seq Number: 3055781

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.06.18 15.39	U	1
Diesel Range Organics (DRO)	C10C28DRO	36.2	15.0	mg/kg	07.06.18 15.39		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.06.18 15.39	U	1
Total TPH	PHC635	36.2	15.0	mg/kg	07.06.18 15.39		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	07.06.18 15.39	
o-Terphenyl	84-15-1	93	%	70-135	07.06.18 15.39	



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW16**
Lab Sample Id: 590704-010

Matrix: Soil
Date Collected: 06.26.18 15.00

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.18 11.30

Basis: Wet Weight

Seq Number: 3055640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.06.18 13.21	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.06.18 13.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	76	%	70-130	07.06.18 13.21		
4-Bromofluorobenzene	460-00-4	86	%	70-130	07.06.18 13.21		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW17**
Lab Sample Id: 590704-011

Matrix: Soil
Date Collected: 06.26.18 15.05

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055446

Date Prep: 07.03.18 09.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	4.98	mg/kg	07.03.18 13.10		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055781

Date Prep: 07.06.18 10.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	19.0	15.0	mg/kg	07.06.18 16.39		1
Diesel Range Organics (DRO)	C10C28DRO	1390	15.0	mg/kg	07.06.18 16.39		1
Oil Range Hydrocarbons (ORO)	PHCG2835	45.9	15.0	mg/kg	07.06.18 16.39		1
Total TPH	PHC635	1450	15.0	mg/kg	07.06.18 16.39		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	88	%	70-135	07.06.18 16.39		
o-Terphenyl	84-15-1	116	%	70-135	07.06.18 16.39		



Certificate of Analytical Results 590704



LT Environmental, Inc., Arvada, CO

PLU 320 H

Sample Id: **SW17**
Lab Sample Id: 590704-011

Matrix: Soil
Date Collected: 06.26.18 15.05

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.06.18 11.30

Basis: Wet Weight

Seq Number: 3055640

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 14.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 14.15	U	1
Ethylbenzene	100-41-4	0.00835	0.00200	mg/kg	07.06.18 14.15		1
m,p-Xylenes	179601-23-1	0.0228	0.00401	mg/kg	07.06.18 14.15		1
o-Xylene	95-47-6	0.0111	0.00200	mg/kg	07.06.18 14.15		1
Total Xylenes	1330-20-7	0.0339	0.00200	mg/kg	07.06.18 14.15		1
Total BTEX		0.0423	0.00200	mg/kg	07.06.18 14.15		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.06.18 14.15		
1,4-Difluorobenzene	540-36-3	113	%	70-130	07.06.18 14.15		



Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

PQL Practical Quantitation Limit **SQL** 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 320 H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

MB Sample Id: 7657778-1-BLK

Matrix: Solid

LCS Sample Id: 7657778-1-BKS

Prep Method: E300P

Date Prep: 07.03.18

LCSD Sample Id: 7657778-1-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	236	94	239	96	90-110	1	20	mg/kg	07.03.18 10:38	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590702-006

Matrix: Soil

MS Sample Id: 590702-006 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590702-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	244	250	484	96	483	96	90-110	0	20	mg/kg	07.03.18 11:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590704-003

Matrix: Soil

MS Sample Id: 590704-003 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590704-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	436	250	661	90	663	91	90-110	0	20	mg/kg	07.03.18 12:16	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055781

MB Sample Id: 7657983-1-BLK

Matrix: Solid

LCS Sample Id: 7657983-1-BKS

Prep Method: TX1005P

Date Prep: 07.06.18

LCSD Sample Id: 7657983-1-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	940	94	943	94	70-135	0	20	mg/kg	07.06.18 11:18	
Diesel Range Organics (DRO)	<15.0	1000	963	96	961	96	70-135	0	20	mg/kg	07.06.18 11:18	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		115		115		70-135	%	07.06.18 11:18
o-Terphenyl	108		107		103		70-135	%	07.06.18 11:18

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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 320 H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055781

Parent Sample Id: 590704-001

Matrix: Soil

MS Sample Id: 590704-001 S

Prep Method: TX1005P

Date Prep: 07.06.18

MSD Sample Id: 590704-001 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	905	91	929	93	70-135	3	20	mg/kg	07.06.18 12:18	
Diesel Range Organics (DRO)	<15.0	1000	951	95	979	98	70-135	3	20	mg/kg	07.06.18 12:18	

Surrogate	MS % Rec	MS Flag	MSD % Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		114		70-135	%	07.06.18 12:18
o-Terphenyl	96		99		70-135	%	07.06.18 12:18

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055548

MB Sample Id: 7657860-1-BLK

Matrix: Solid

LCS Sample Id: 7657860-1-BKS

Prep Method: SW5030B

Date Prep: 07.05.18

LCSD Sample Id: 7657860-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS % Rec	LCSD Result	LCSD % Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0921	91	0.0988	98	70-130	7	35	mg/kg	07.05.18 08:01	
Toluene	<0.00201	0.101	0.0979	97	0.102	101	70-130	4	35	mg/kg	07.05.18 08:01	
Ethylbenzene	<0.00201	0.101	0.0946	94	0.101	100	70-130	7	35	mg/kg	07.05.18 08:01	
m,p-Xylenes	<0.00402	0.201	0.203	101	0.211	104	70-130	4	35	mg/kg	07.05.18 08:01	
o-Xylene	<0.00201	0.101	0.0951	94	0.0960	95	70-130	1	35	mg/kg	07.05.18 08:01	

Surrogate	MB % Rec	MB Flag	LCS % Rec	LCS Flag	LCSD % Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	89		82		108		70-130	%	07.05.18 08:01
4-Bromofluorobenzene	74		77		95		70-130	%	07.05.18 08:01

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055640

MB Sample Id: 7657902-1-BLK

Matrix: Solid

LCS Sample Id: 7657902-1-BKS

Prep Method: SW5030B

Date Prep: 07.06.18

LCSD Sample Id: 7657902-1-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	0.0927	93	0.0849	84	70-130	9	35	mg/kg	07.06.18 10:53	
Toluene	<0.00200	0.100	0.0996	100	0.0891	88	70-130	11	35	mg/kg	07.06.18 10:53	
Ethylbenzene	<0.00200	0.100	0.0951	95	0.0868	86	70-130	9	35	mg/kg	07.06.18 10:53	
m,p-Xylenes	<0.00401	0.200	0.195	98	0.182	90	70-130	7	35	mg/kg	07.06.18 10:53	
o-Xylene	<0.00200	0.100	0.0930	93	0.0845	84	70-130	10	35	mg/kg	07.06.18 10:53	

Surrogate	MB % Rec	MB Flag	LCS % Rec	LCS Flag	LCSD % Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		94		86		70-130	%	07.06.18 10:53
4-Bromofluorobenzene	88		83		77		70-130	%	07.06.18 10:53

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

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

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 320 H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055548

Parent Sample Id: 590701-001

Matrix: Soil

MS Sample Id: 590701-001 S

Prep Method: SW5030B

Date Prep: 07.05.18

MSD Sample Id: 590701-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0782	78	0.109	109	70-130	33	35	mg/kg	07.05.18 08:38	
Toluene	<0.00201	0.100	0.0812	81	0.116	116	70-130	35	35	mg/kg	07.05.18 08:38	
Ethylbenzene	<0.00201	0.100	0.0763	76	0.112	112	70-130	38	35	mg/kg	07.05.18 08:38	F
m,p-Xylenes	<0.00402	0.201	0.161	80	0.230	115	70-130	35	35	mg/kg	07.05.18 08:38	
o-Xylene	<0.00201	0.100	0.0793	79	0.102	102	70-130	25	35	mg/kg	07.05.18 08:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	127		93		70-130	%	07.05.18 08:38
4-Bromofluorobenzene	114		79		70-130	%	07.05.18 08:38

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055640

Parent Sample Id: 590757-001

Matrix: Soil

MS Sample Id: 590757-001 S

Prep Method: SW5030B

Date Prep: 07.06.18

MSD Sample Id: 590757-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0869	87	0.0796	79	70-130	9	35	mg/kg	07.06.18 11:27	
Toluene	<0.00201	0.100	0.0862	86	0.0787	78	70-130	9	35	mg/kg	07.06.18 11:27	
Ethylbenzene	<0.00201	0.100	0.0824	82	0.0765	76	70-130	7	35	mg/kg	07.06.18 11:27	
m,p-Xylenes	<0.00402	0.201	0.174	87	0.157	78	70-130	10	35	mg/kg	07.06.18 11:27	
o-Xylene	<0.00201	0.100	0.0745	75	0.0760	75	70-130	2	35	mg/kg	07.06.18 11:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		94		70-130	%	07.06.18 11:27
4-Bromofluorobenzene	84		80		70-130	%	07.06.18 11:27

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. = $\text{Log}(\text{Sample Duplicate}) - \text{Log}(\text{Original Sample})$

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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Phoenix, Arizona (480-355-0900)

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Client / Reporting Information Company Name / Branch: IT Envisionment - Permian Office Company Address: 3300 W 14th St, Box 1, Unit 403 Midland, TX Email: Abdove@Envision.com Phone No: 432-704-5178 Project Contact: Adrian Ballu Sample's Name: David Thomas				Project Information Project Name/Number: PLU 320 H / 012915083 Project Location: NM Invoice To: XTG Energy - 44th Ltr 11 PO Number: 288-3769				Analytical Information 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, WI = Wipe, O = Oil, WW = Waste Water, A = Air			
No. Field ID / Point of Collection 1 SW7 2 SW8 3 SW9 4 SW10 5 SW11 6 SW12 7 SW13 8 SW14 9 SW15 10 SW16				Collection Sample Depth: 3' Date: 6-26-18 Time: 1415 Matrix: Soil # of bottles: 1 HCl: 1 NaOH/Zn Acetate: 1 HNO3: 1 H2SO4: 1 NaOH: 1 NaHSO4: 1 MEQH: 1 NONE: 1				Number of preserved bottles BTEX: X TPH: X Chloride: X			
Turnaround Time (Business days) ☐ Same Day TAT ☐ Next Day EMERGENCY ☐ 2 Day EMERGENCY ☐ 3 Day EMERGENCY ☐ 5 Day TAT ☐ 7 Day TAT ☐ Contract TAT ☐ TRRP Checklist				Data Deliverable Information ☐ Level II Std QC ☐ Level III Std QC+ Forms ☐ Level 3 (CLP Forms) ☐ TRRP Level IV ☐ UST / RG 411 ☐ Level IV (Full Data Pkg /raw data)				Notes:			
Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time: 6/26/18 Date Time: 6/26/18 Date Time: 6/26/18				Received By: David Thomas Received By: David Thomas Received By: David Thomas			
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 FED-EX / UPS: Tracking # 70584593635				Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time: 6/26/18 Date Time: 6/26/18 Date Time: 6/26/18			
Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time: 6/26/18 Date Time: 6/26/18 Date Time: 6/26/18				Received By: David Thomas Received By: David Thomas Received By: David Thomas			
Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time: 6/26/18 Date Time: 6/26/18 Date Time: 6/26/18				Received By: David Thomas Received By: David Thomas Received By: David Thomas			
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Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time: 6/26/18 Date Time: 6/26/18 Date Time: 6/26/18				Received By: David Thomas Received By: David Thomas Received By: David Thomas			
Relinquished by: David Thomas Relinquished by: David Thomas Relinquished by: David Thomas				Date Time:							



Setting the Standard since 1990
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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

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CHAIN OF CUSTODY
Page 2 of 2

Page 2 Of 2

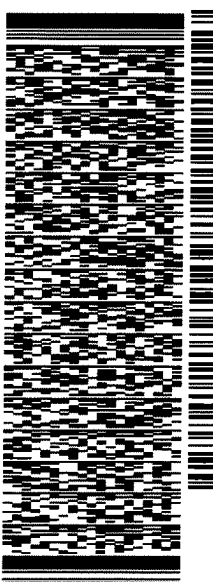
Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: Environmental - Permian Office				Project Name/Number: PCA 320 H / 012918092											
Company Address: 3300 N "A" St, Bldg 2, Unit 103, Midland, TX				Project Location: N M											
Email: Adrian Bakker 432-704-5178				Invoice To: X70 - Emergency - 44th LHA 1011											
Project Contact: Adrian Bakker				PO Number: 2129-3769											
Sampler's Name															
No.				Field ID / Point of Collection											
				Sample Depth				Collection				Number of preserved bottles			
1				SW17				4'				6-26-18 1505			
2															
3															
4															
5															
6															
7															
8															
9															
10															
Turnaround Time (Business days)								Data Deliverable Information				Notes:			
☐ Same Day TAT				☐ 5 Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg /raw data)			
☐ Next Day EMERGENCY				☐ 7 Day TAT				☐ Level III Std QC+ Forms				☐ TRRP Level IV			
☐ 2 Day EMERGENCY				☐ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG 411			
☐ 3 Day EMERGENCY				☒ Standard				☐ TRRP Checklist							
TAT Starts Day received by Lab, if received by 5:00 pm															
Relinquished by Sampler:				Date Time:				Received By:				Date Time:			
1				6/21/19 10:00				1				6/27 15:30			
Relinquished by:				Date Time:				Received By:				Date Time:			
3								3				4			
Relinquished by:				Date Time:				Received By:				Date Time:			
5								5							
Onsite				COT Temp.				Preserved where applicable				Onsite			
3.8				16.0								3.8			
16.0															

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 \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

ORIGIN ID:MAFA (806) 794-1296 XENCO 1211 W. FLORIDA AVE MIDLAND, TX 79701 UNITED STATES US	SHIP DATE: 27 JUN 18 ACTWGT: 61.00 LB CAD: 101813706/NET3980 DIMS: 28x14x14 IN BILL RECIPIENT
TO XENCO XENCO 1211 W. FLORIDA AVE MIDLAND TX 79701 (806) 794-1296 REF: INV: PO: DEPT:	

TRK# 7725 8459 3635
 0201
41 MAFA
 TX-US LBB
 79701

THU - 28 JUN 10:30A
 PRIORITY OVERNIGHT

552J2B3DF/DCA5

After printing this label:

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CUSTODY SEAL
Date 6/27/14
Signature [Signature]

Thermo
SCIENTIFIC
90009



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/28/2018 10:10:00 AM

Work Order #: 590704

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)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#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)?	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: 06/28/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/28/2018

Analytical Report 590706

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 320H

012918082

06-JUL-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
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)



06-JUL-18

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

Reference: XENCO Report No(s): **590706**
PLU 320H
Project Address: 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) 590706. 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. 590706 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 590706****LT Environmental, Inc., Arvada, CO**

PLU 320H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS1	S	06-25-18 11:00	6 ft	590706-001
FS2	S	06-25-18 13:30	3 ft	590706-002
FS3	S	06-25-18 13:00	5 ft	590706-003
FS4	S	06-25-18 15:20	4.5 ft	590706-004
SW1	S	06-25-18 11:30	4 ft	590706-005
SW2	S	06-25-18 14:30	2 ft	590706-006
SW3	S	06-25-18 14:45	2 ft	590706-007
SW4	S	06-26-18 14:00	2 ft	590706-008
SW5	S	06-26-18 14:05	3 ft	590706-009
SW6	S	06-26-18 14:10	3 ft	590706-010



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320H

Project ID: 012918082
Work Order Number(s): 590706

Report Date: 06-JUL-18
Date Received: 06/28/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3055565 BTEX by EPA 8021B

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

Batch: LBA-3055640 BTEX by EPA 8021B

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



Certificate of Analysis Summary 590706

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H

Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am
Report Date: 06-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	590706-001	590706-002	590706-003	590706-004	590706-005	590706-006
	<i>Field Id:</i>	FS1	FS2	FS3	FS4	SW1	SW2
	<i>Depth:</i>	6- ft	3- ft	5- ft	4.5- ft	4- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-25-18 11:00	Jun-25-18 13:30	Jun-25-18 13:00	Jun-25-18 15:20	Jun-25-18 11:30	Jun-25-18 14:30
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00
	<i>Analyzed:</i>	Jul-06-18 06:49	Jul-06-18 07:07	Jul-06-18 07:25	Jul-06-18 08:12	Jul-06-18 08:30	Jul-06-18 08:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00402 0.00402	<0.00400 0.00400	<0.00399 0.00399	<0.00401 0.00401	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 09:30	Jul-03-18 10:45	Jul-03-18 10:45	Jul-03-18 10:45
	<i>Analyzed:</i>	Jul-03-18 13:15	Jul-03-18 13:21	Jul-03-18 13:26	Jul-03-18 13:59	Jul-03-18 14:15	Jul-03-18 14:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		187 5.00	14.9 5.00	69.6 4.95	79.7 4.96	180 4.97	56.9 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00
	<i>Analyzed:</i>	Jul-05-18 16:43	Jul-05-18 17:03	Jul-05-18 17:22	Jul-05-18 17:42	Jul-05-18 18:02	Jul-05-18 18:22
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg 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	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<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 Analysis Summary 590706

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H

Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-28-18 10:10 am
Report Date: 06-JUL-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	590706-007	590706-008	590706-009	590706-010		
	Field Id:	SW3	SW4	SW5	SW6		
	Depth:	2- ft	2- ft	3- ft	3- ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	Jun-25-18 14:45	Jun-26-18 14:00	Jun-26-18 14:05	Jun-26-18 14:10		
BTEX by EPA 8021B	Extracted:	Jul-05-18 16:00	Jul-05-18 16:00	Jul-05-18 16:00	Jul-06-18 11:30		
	Analyzed:	Jul-06-18 09:06	Jul-06-18 09:24	Jul-06-18 07:56	Jul-06-18 13:39		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
m,p-Xylenes		<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402	<0.00398 0.00398		
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00199 0.00199		
Inorganic Anions by EPA 300	Extracted:	Jul-03-18 10:45	Jul-03-18 10:45	Jul-03-18 10:45	Jul-03-18 10:45		
	Analyzed:	Jul-03-18 14:26	Jul-03-18 14:31	Jul-03-18 14:47	Jul-03-18 15:14		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Chloride		73.7 5.00	87.3 4.96	11.4 4.99	80.2 4.97		
TPH by SW8015 Mod	Extracted:	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00	Jul-05-18 08:00		
	Analyzed:	Jul-05-18 18:42	Jul-05-18 19:02	Jul-05-18 19:22	Jul-05-18 19:41		
	Units/RL:	mg/kg	mg/kg	mg/kg	mg/kg		
		RL	RL	RL	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<15.0 15.0		
Diesel Range Organics (DRO)		<15.0 15.0	1520 15.0	<14.9 14.9	<15.0 15.0		
Oil Range Hydrocarbons (ORO)		<15.0 15.0	34.7 15.0	<14.9 14.9	<15.0 15.0		
Total TPH		<15.0 15.0	1550 15.0	<14.9 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 Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **FS1** Matrix: **Soil** Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-001 Date Collected: 06.25.18 11.00 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 07.03.18 09.30 Basis: **Wet Weight**
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	187	5.00	mg/kg	07.03.18 13.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 07.05.18 08.00 Basis: **Wet Weight**
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 16.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 16.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 16.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.05.18 16.43	
o-Terphenyl	84-15-1	96	%	70-135	07.05.18 16.43	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **FS1**
Lab Sample Id: 590706-001

Matrix: Soil
Date Collected: 06.25.18 11.00

Date Received: 06.28.18 10.10
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.06.18 06.49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.06.18 06.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.06.18 06.49		
4-Bromofluorobenzene	460-00-4	97	%	70-130	07.06.18 06.49		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: FS2 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-002 Date Collected: 06.25.18 13.30 Sample Depth: 3 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.9	5.00	mg/kg	07.03.18 13.21		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 17.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 17.03	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 17.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.05.18 17.03	
o-Terphenyl	84-15-1	95	%	70-135	07.05.18 17.03	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: FS2
Lab Sample Id: 590706-002

Matrix: Soil
Date Collected: 06.25.18 13.30

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.06.18 07.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 07.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	07.06.18 07.07		
1,4-Difluorobenzene	540-36-3	86	%	70-130	07.06.18 07.07		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: FS3 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-003 Date Collected: 06.25.18 13.00 Sample Depth: 5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 09.30 Basis: Wet Weight
 Seq Number: 3055446

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	69.6	4.95	mg/kg	07.03.18 13.26		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 17.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 17.22	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 17.22	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 17.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.05.18 17.22	
o-Terphenyl	84-15-1	93	%	70-135	07.05.18 17.22	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: FS3
Lab Sample Id: 590706-003

Matrix: Soil
Date Collected: 06.25.18 13.00

Date Received: 06.28.18 10.10
Sample Depth: 5 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.06.18 07.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 07.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.06.18 07.25		
4-Bromofluorobenzene	460-00-4	116	%	70-130	07.06.18 07.25		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: FS4 Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-004 Date Collected: 06.25.18 15.20 Sample Depth: 4.5 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	79.7	4.96	mg/kg	07.03.18 13.59		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 17.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 17.42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 17.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 17.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.05.18 17.42	
o-Terphenyl	84-15-1	98	%	70-135	07.05.18 17.42	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **FS4**
Lab Sample Id: 590706-004

Matrix: Soil
Date Collected: 06.25.18 15.20

Date Received: 06.28.18 10.10
Sample Depth: 4.5 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.06.18 08.12	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 08.12	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	129	%	70-130	07.06.18 08.12		
4-Bromofluorobenzene	460-00-4	118	%	70-130	07.06.18 08.12		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW1** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-005 Date Collected: 06.25.18 11.30 Sample Depth: 4 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	180	4.97	mg/kg	07.03.18 14.15		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 18.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 18.02	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 18.02	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 18.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	07.05.18 18.02	
o-Terphenyl	84-15-1	98	%	70-135	07.05.18 18.02	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW1**
Lab Sample Id: 590706-005

Matrix: Soil
Date Collected: 06.25.18 11.30

Date Received: 06.28.18 10.10
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.06.18 08.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.06.18 08.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.06.18 08.30		
1,4-Difluorobenzene	540-36-3	120	%	70-130	07.06.18 08.30		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW2** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-006 Date Collected: 06.25.18 14.30 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	56.9	5.00	mg/kg	07.03.18 14.20		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.05.18 18.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.05.18 18.22	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.05.18 18.22	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.05.18 18.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.05.18 18.22	
o-Terphenyl	84-15-1	92	%	70-135	07.05.18 18.22	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW2**
Lab Sample Id: 590706-006

Matrix: Soil
Date Collected: 06.25.18 14.30

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.06.18 08.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.06.18 08.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	82	%	70-130	07.06.18 08.48		
1,4-Difluorobenzene	540-36-3	77	%	70-130	07.06.18 08.48		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW3** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-007 Date Collected: 06.25.18 14.45 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	73.7	5.00	mg/kg	07.03.18 14.26		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 18.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 18.42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 18.42	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.05.18 18.42	
o-Terphenyl	84-15-1	93	%	70-135	07.05.18 18.42	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW3**
Lab Sample Id: 590706-007

Matrix: Soil
Date Collected: 06.25.18 14.45

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.06.18 09.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 09.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	86	%	70-130	07.06.18 09.06		
1,4-Difluorobenzene	540-36-3	84	%	70-130	07.06.18 09.06		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW4**
Lab Sample Id: 590706-008

Matrix: Soil
Date Collected: 06.26.18 14.00

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055450

Date Prep: 07.03.18 10.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	87.3	4.96	mg/kg	07.03.18 14.31		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055653

Date Prep: 07.05.18 08.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 19.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	1520	15.0	mg/kg	07.05.18 19.02		1
Oil Range Hydrocarbons (ORO)	PHCG2835	34.7	15.0	mg/kg	07.05.18 19.02		1
Total TPH	PHC635	1550	15.0	mg/kg	07.05.18 19.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	07.05.18 19.02	
o-Terphenyl	84-15-1	122	%	70-135	07.05.18 19.02	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW4**
Lab Sample Id: 590706-008

Matrix: Soil
Date Collected: 06.26.18 14.00

Date Received: 06.28.18 10.10
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.05.18 16.00

Basis: Wet Weight

Seq Number: 3055565

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.06.18 09.24	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.06.18 09.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	07.06.18 09.24		
4-Bromofluorobenzene	460-00-4	83	%	70-130	07.06.18 09.24		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW5** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-009 Date Collected: 06.26.18 14.05 Sample Depth: 3 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.4	4.99	mg/kg	07.03.18 14.47		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.05.18 19.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.05.18 19.22	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.05.18 19.22	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.05.18 19.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.05.18 19.22	
o-Terphenyl	84-15-1	94	%	70-135	07.05.18 19.22	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW5**
Lab Sample Id: 590706-009

Matrix: Soil
Date Collected: 06.26.18 14.05

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055565

Date Prep: 07.05.18 16.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.06.18 07.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.06.18 07.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	07.06.18 07.56		
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.06.18 07.56		



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW6** Matrix: Soil Date Received: 06.28.18 10.10
 Lab Sample Id: 590706-010 Date Collected: 06.26.18 14.10 Sample Depth: 3 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.03.18 10.45 Basis: Wet Weight
 Seq Number: 3055450

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	80.2	4.97	mg/kg	07.03.18 15.14		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.05.18 08.00 Basis: Wet Weight
 Seq Number: 3055653

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.05.18 19.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.05.18 19.41	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.05.18 19.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.05.18 19.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	07.05.18 19.41	
o-Terphenyl	84-15-1	92	%	70-135	07.05.18 19.41	



Certificate of Analytical Results 590706



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SW6**
Lab Sample Id: 590706-010

Matrix: Soil
Date Collected: 06.26.18 14.10

Date Received: 06.28.18 10.10
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055640

Date Prep: 07.06.18 11.30

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.06.18 13.39	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.06.18 13.39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	72	%	70-130	07.06.18 13.39		
1,4-Difluorobenzene	540-36-3	88	%	70-130	07.06.18 13.39		



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 320H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

MB Sample Id: 7657778-1-BLK

Matrix: Solid

LCS Sample Id: 7657778-1-BKS

Prep Method: E300P

Date Prep: 07.03.18

LCSD Sample Id: 7657778-1-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	236	94	239	96	90-110	1	20	mg/kg	07.03.18 10:38	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055450

MB Sample Id: 7657779-1-BLK

Matrix: Solid

LCS Sample Id: 7657779-1-BKS

Prep Method: E300P

Date Prep: 07.03.18

LCSD Sample Id: 7657779-1-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	235	94	236	94	90-110	0	20	mg/kg	07.03.18 13:48	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590702-006

Matrix: Soil

MS Sample Id: 590702-006 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590702-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	244	250	484	96	483	96	90-110	0	20	mg/kg	07.03.18 11:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055446

Parent Sample Id: 590704-003

Matrix: Soil

MS Sample Id: 590704-003 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590704-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	436	250	661	90	663	91	90-110	0	20	mg/kg	07.03.18 12:16	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055450

Parent Sample Id: 590706-004

Matrix: Soil

MS Sample Id: 590706-004 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590706-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	79.7	248	328	100	329	101	90-110	0	20	mg/kg	07.03.18 14:04	

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



LT Environmental, Inc.

PLU 320H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055450

Parent Sample Id: 590706-010

Matrix: Soil

MS Sample Id: 590706-010 S

Prep Method: E300P

Date Prep: 07.03.18

MSD Sample Id: 590706-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	80.2	249	327	99	328	100	90-110	0	20	mg/kg	07.03.18 15:20	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055653

MB Sample Id: 7657920-1-BLK

Matrix: Solid

LCS Sample Id: 7657920-1-BKS

Prep Method: TX1005P

Date Prep: 07.05.18

LCSD Sample Id: 7657920-1-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	937	94	992	99	70-135	6	20	mg/kg	07.05.18 11:29	
Diesel Range Organics (DRO)	<15.0	1000	958	96	1020	102	70-135	6	20	mg/kg	07.05.18 11:29	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	102		117		123		70-135	%	07.05.18 11:29
o-Terphenyl	107		105		114		70-135	%	07.05.18 11:29

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055653

Parent Sample Id: 590702-001

Matrix: Soil

MS Sample Id: 590702-001 S

Prep Method: TX1005P

Date Prep: 07.05.18

MSD Sample Id: 590702-001 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	932	93	959	96	70-135	3	20	mg/kg	07.05.18 12:27	
Diesel Range Organics (DRO)	32.8	999	1020	99	1060	103	70-135	4	20	mg/kg	07.05.18 12:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		118		70-135	%	07.05.18 12:27
o-Terphenyl	102		104		70-135	%	07.05.18 12:27

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 320H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055565

MB Sample Id: 7657885-1-BLK

Matrix: Solid

LCS Sample Id: 7657885-1-BKS

Prep Method: SW5030B

Date Prep: 07.05.18

LCSD Sample Id: 7657885-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0852	85	0.0933	92	70-130	9	35	mg/kg	07.06.18 01:35	
Toluene	<0.00201	0.100	0.0820	82	0.0953	94	70-130	15	35	mg/kg	07.06.18 01:35	
Ethylbenzene	<0.00201	0.100	0.0813	81	0.0940	93	70-130	14	35	mg/kg	07.06.18 01:35	
m,p-Xylenes	<0.00402	0.201	0.168	84	0.194	96	70-130	14	35	mg/kg	07.06.18 01:35	
o-Xylene	<0.00201	0.100	0.0820	82	0.0921	91	70-130	12	35	mg/kg	07.06.18 01:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		77		88		70-130	%	07.06.18 01:35
4-Bromofluorobenzene	86		73		95		70-130	%	07.06.18 01:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055640

MB Sample Id: 7657902-1-BLK

Matrix: Solid

LCS Sample Id: 7657902-1-BKS

Prep Method: SW5030B

Date Prep: 07.06.18

LCSD Sample Id: 7657902-1-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	0.0927	93	0.0849	84	70-130	9	35	mg/kg	07.06.18 10:53	
Toluene	<0.00200	0.100	0.0996	100	0.0891	88	70-130	11	35	mg/kg	07.06.18 10:53	
Ethylbenzene	<0.00200	0.100	0.0951	95	0.0868	86	70-130	9	35	mg/kg	07.06.18 10:53	
m,p-Xylenes	<0.00401	0.200	0.195	98	0.182	90	70-130	7	35	mg/kg	07.06.18 10:53	
o-Xylene	<0.00200	0.100	0.0930	93	0.0845	84	70-130	10	35	mg/kg	07.06.18 10:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		94		86		70-130	%	07.06.18 10:53
4-Bromofluorobenzene	88		83		77		70-130	%	07.06.18 10:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055565

Parent Sample Id: 590702-001

Matrix: Soil

MS Sample Id: 590702-001 S

Prep Method: SW5030B

Date Prep: 07.05.18

MSD Sample Id: 590702-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0823	83	0.0904	90	70-130	9	35	mg/kg	07.06.18 02:11	
Toluene	<0.00199	0.0996	0.0836	84	0.0927	93	70-130	10	35	mg/kg	07.06.18 02:11	
Ethylbenzene	<0.00199	0.0996	0.0797	80	0.0890	89	70-130	11	35	mg/kg	07.06.18 02:11	
m,p-Xylenes	<0.00398	0.199	0.163	82	0.179	90	70-130	9	35	mg/kg	07.06.18 02:11	
o-Xylene	<0.00199	0.0996	0.0742	74	0.0852	85	70-130	14	35	mg/kg	07.06.18 02:11	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		124		70-130	%	07.06.18 02:11
4-Bromofluorobenzene	91		102		70-130	%	07.06.18 02:11

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

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

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 320H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055640

Parent Sample Id: 590757-001

Matrix: Soil

MS Sample Id: 590757-001 S

Prep Method: SW5030B

Date Prep: 07.06.18

MSD Sample Id: 590757-001 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	0.0869	87	0.0796	79	70-130	9	35	mg/kg	07.06.18 11:27	
Toluene	<0.00201	0.100	0.0862	86	0.0787	78	70-130	9	35	mg/kg	07.06.18 11:27	
Ethylbenzene	<0.00201	0.100	0.0824	82	0.0765	76	70-130	7	35	mg/kg	07.06.18 11:27	
m,p-Xylenes	<0.00402	0.201	0.174	87	0.157	78	70-130	10	35	mg/kg	07.06.18 11:27	
o-Xylene	<0.00201	0.100	0.0745	75	0.0760	75	70-130	2	35	mg/kg	07.06.18 11:27	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		94		70-130	%	07.06.18 11:27
4-Bromofluorobenzene	84		80		70-130	%	07.06.18 11:27

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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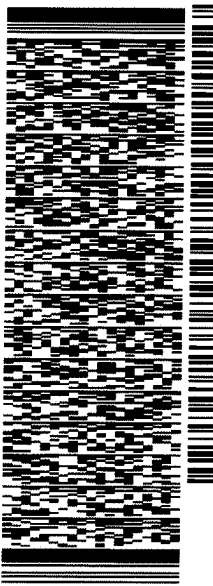
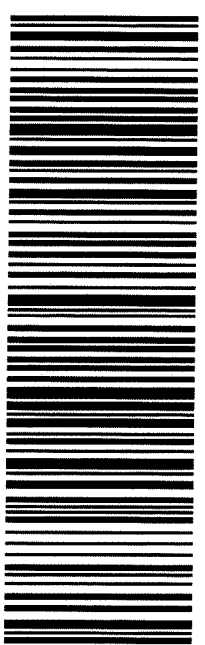
www.xenco.com

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CHAIN OF CUSTODY
Page 1 of 1

Page 1 of 1

Client / Reporting Information							Project Information						Analytical Information				Matrix Codes										
Company Name / Branch:				L'Eclairissement - Permian Office			Project Name/Number:				PLU 320 W / 012918082																
Company Address:				320 N St Rd, Midland, TX			Project Location:				NM																
Email:				Abdullah@l'eclairissement.com			Phone No.:				432-704-5178																
Project Contact:				Adrian Barker			Invoice To:				XTO - Energy - Kyle Litherell																
Sampler's Name:				David Hernandez			PO Number:				2AP-3769																
No.	Field ID / Point of Collection						Collection		Number of Preserved Bottles																		
		Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chlorides										
1		FS1	6'	6-25-18	1100	50.1	1								X	X	X										
2		FS2	3'		1330										X	X	X										
3		FS3	5'		1300										X	X	X										
4		FS4	4.5'		1520										X	X	X										
5		SW1	4'		1130										X	X	X										
6		SW2	2'		1430										X	X	X										
7		SW3	2'		1445										X	X	X										
8		SW4	2'	6-26-18	1400										X	X	X										
9		SW5	3'		1405										X	X	X										
10		SW6	3'		1410										X	X	X										
Turnaround Time (Business days)							Data Deliverable Information							Notes:													
Same Day TAT							☐ Level II Std QC							☐ Level IV (Full Data Pkg /raw data)													
Next Day EMERGENCY							☐ 7 Day TAT							☐ Level III Std QC+ Forms							☐ TRRP Level IV						
2 Day EMERGENCY							☐ Contract TAT							☐ Level 3 (CLP Forms)							☐ UST / RG 411						
3 Day EMERGENCY							☒ Standard							☐ TRRP Checklist													
TAT Starts Day received by Lab, if received by 5:00 pm																											
Relinquished by Sampler:							SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY							FED-EX / UPS Tracking #							77584593625						
Relinquished By:							Date Time:							Received By:							Date Time:						
1							6-27-18 / 0900							2							6-27-18 / 1530						
Relinquished By:							Date Time:							Received By:							Date Time:						
3														4													
Relinquished by:							Date Time:							Received By:							Date Time:						
5														On Site							Thermo Corr. Factor						
														3.2							12 d.o						

ORIGIN ID:MAFA (806) 794-1296 XENCO 1211 W. FLORIDA AVE MIDLAND, TX 79701 UNITED STATES US		SHIP DATE: 27 JUN18 ACT WGT: 91.00 LB CAD: 107813706INET3980 DIMS: 26x14x14 IN BILL RECIPIENT
TO XENCO XENCO 1211 W. FLORIDA AVE MIDLAND TX 79701 (806) 794-1296 INV: REF: PO: DEPT:		
 		
THU - 28 JUN 10:30A PRIORITY OVERNIGHT TRK# 7725 8459 3635 41 MAFA TX-US LBB 79701 		

552J293DF/DCA5

After printing this label:

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CUSTODY SEAL
Date 3/27/14
Signature [Signature]

Thermo
SCIENTIFIC
90009



Client: LT Environmental, Inc.

Date/ Time Received: 06/28/2018 10:10:00 AM

Work Order #: 590706

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)?	3.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	N/A
#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)?	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: 06/28/2018

Checklist reviewed by:

Jessica Kramer

Date: 06/28/2018

Analytical Report 578592

for
LT Environmental, Inc.

Project Manager: Adrian Baker

PLU #320 2RP-3788

14-MAR-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):

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

Xenco-Dallas (EPA Lab code: TX01468):

Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)

Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-18-14)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)

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

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

Xenco-Atlanta (LELAP Lab ID #04176)



14-MAR-18

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

Reference: XENCO Report No(s): **578592**
PLU #320 2RP-3788
Project Address: 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) 578592. 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. 578592 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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**Sample Cross Reference 578592****LT Environmental, Inc., Arvada, CO**

PLU #320 2RP-3788

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1	S	03-06-18 10:45	6 In	578592-001
SS2	S	03-06-18 10:55	6 In	578592-002
SS3	S	03-06-18 11:05	6 In	578592-003
SS4	S	03-06-18 11:15	6 In	578592-004
SS5	S	03-06-18 11:25	6 In	578592-005

**CASE NARRATIVE****Client Name: LT Environmental, Inc.****Project Name: PLU #320 2RP-3788**Project ID:
Work Order Number(s): 578592Report Date: 14-MAR-18
Date Received: 03/07/2018**Sample receipt non conformances and comments:****Sample receipt non conformances and comments per sample:**

None

Analytical non conformances and comments:

Batch: LBA-3043356 BTEX by EPA 8021B

m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 578592-001, -002, -003

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

Lab Sample ID 578592-001 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: 578592-001, -002, -003.

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

Batch: LBA-3043357 BTEX by EPA 8021B

Lab Sample ID 578592-004 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: 578592-004, -005.

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.



Certificate of Analysis Summary 578592

LT Environmental, Inc., Arvada, CO

Project Name: PLU #320 2RP-3788

Project Id:

Contact: Adrian Baker

Project Location: NM

Date Received in Lab: Wed Mar-07-18 03:08 pm

Report Date: 14-MAR-18

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	578592-001	578592-002	578592-003	578592-004	578592-005	
	<i>Field Id:</i>	SS1	SS2	SS3	SS4	SS5	
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	Mar-06-18 10:45	Mar-06-18 10:55	Mar-06-18 11:05	Mar-06-18 11:15	Mar-06-18 11:25	
BTEX by EPA 8021B	<i>Extracted:</i>	Mar-10-18 12:00	Mar-10-18 12:00	Mar-10-18 12:00	Mar-10-18 12:15	Mar-10-18 12:15	
	<i>Analyzed:</i>	Mar-10-18 16:00	Mar-10-18 16:19	Mar-10-18 16:38	Mar-11-18 09:05	Mar-11-18 10:03	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00398 0.00398	<0.00402 0.00402	<0.00399 0.00399	
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	
Inorganic Anions by EPA 300	<i>Extracted:</i>	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	Mar-12-18 15:00	
	<i>Analyzed:</i>	Mar-13-18 18:28	Mar-13-18 18:33	Mar-13-18 18:39	Mar-13-18 18:44	Mar-13-18 18:49	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		2590 25.0	1040 24.8	21300 248	693 4.99	343 4.97	
TPH by SW8015 Mod	<i>Extracted:</i>	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	Mar-10-18 16:00	
	<i>Analyzed:</i>	Mar-12-18 08:23	Mar-12-18 09:03	Mar-12-18 09:23	Mar-12-18 09:43	Mar-12-18 10:03	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<74.9 74.9	<74.9 74.9	<74.9 74.9	<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		7250 74.9	11600 74.9	3570 74.9	255 15.0	381 15.0	
Oil Range Hydrocarbons (ORO)		1710 74.9	2710 74.9	544 74.9	96.6 15.0	105 15.0	
Total TPH		8960 74.9	14300 74.9	4110 74.9	352 15.0	486 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 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS1 Matrix: Soil Date Received: 03.07.18 15.08
 Lab Sample Id: 578592-001 Date Collected: 03.06.18 10.45 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.12.18 15.00 Basis: Wet Weight
 Seq Number: 3043628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2590	25.0	mg/kg	03.13.18 18.28		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.10.18 16.00 Basis: Wet Weight
 Seq Number: 3043517

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	03.12.18 08.23	U	5
Diesel Range Organics (DRO)	C10C28DRO	7250	74.9	mg/kg	03.12.18 08.23		5
Oil Range Hydrocarbons (ORO)	PHCG2835	1710	74.9	mg/kg	03.12.18 08.23		5
Total TPH	PHC635	8960	74.9	mg/kg	03.12.18 08.23		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	03.12.18 08.23	
o-Terphenyl	84-15-1	88	%	70-135	03.12.18 08.23	



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS1
Lab Sample Id: 578592-001

Matrix: Soil
Date Collected: 03.06.18 10.45

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	03.10.18 16.00	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
Total BTEX		<0.00202	0.00202	mg/kg	03.10.18 16.00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	81	%	70-130	03.10.18 16.00		
4-Bromofluorobenzene	460-00-4	95	%	70-130	03.10.18 16.00		



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS2 Matrix: Soil Date Received: 03.07.18 15.08
 Lab Sample Id: 578592-002 Date Collected: 03.06.18 10.55 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.12.18 15.00 Basis: Wet Weight
 Seq Number: 3043628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1040	24.8	mg/kg	03.13.18 18.33		5

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.10.18 16.00 Basis: Wet Weight
 Seq Number: 3043517

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	03.12.18 09.03	U	5
Diesel Range Organics (DRO)	C10C28DRO	11600	74.9	mg/kg	03.12.18 09.03		5
Oil Range Hydrocarbons (ORO)	PHCG2835	2710	74.9	mg/kg	03.12.18 09.03		5
Total TPH	PHC635	14300	74.9	mg/kg	03.12.18 09.03		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	03.12.18 09.03	
o-Terphenyl	84-15-1	86	%	70-135	03.12.18 09.03	



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS2
Lab Sample Id: 578592-002

Matrix: Soil
Date Collected: 03.06.18 10.55

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.10.18 16.19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.10.18 16.19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	71	%	70-130	03.10.18 16.19		
4-Bromofluorobenzene	460-00-4	73	%	70-130	03.10.18 16.19		



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS3
Lab Sample Id: 578592-003

Matrix: Soil
Date Collected: 03.06.18 11.05

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043628

Date Prep: 03.12.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21300	248	mg/kg	03.13.18 18.39		50

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3043517

Date Prep: 03.10.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	03.12.18 09.23	U	5
Diesel Range Organics (DRO)	C10C28DRO	3570	74.9	mg/kg	03.12.18 09.23		5
Oil Range Hydrocarbons (ORO)	PHCG2835	544	74.9	mg/kg	03.12.18 09.23		5
Total TPH	PHC635	4110	74.9	mg/kg	03.12.18 09.23		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	03.12.18 09.23	
o-Terphenyl	84-15-1	81	%	70-135	03.12.18 09.23	



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS3
Lab Sample Id: 578592-003

Matrix: Soil
Date Collected: 03.06.18 11.05

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.00

Basis: Wet Weight

Seq Number: 3043356

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	03.10.18 16.38	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
Total BTEX		<0.00199	0.00199	mg/kg	03.10.18 16.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	03.10.18 16.38		
1,4-Difluorobenzene	540-36-3	74	%	70-130	03.10.18 16.38		



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS4
Lab Sample Id: 578592-004

Matrix: Soil
Date Collected: 03.06.18 11.15

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: Inorganic Anions by EPA 300

Tech: OJS

Analyst: OJS

Seq Number: 3043628

Date Prep: 03.12.18 15.00

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	693	4.99	mg/kg	03.13.18 18.44		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3043517

Date Prep: 03.10.18 16.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.18 09.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	255	15.0	mg/kg	03.12.18 09.43		1
Oil Range Hydrocarbons (ORO)	PHCG2835	96.6	15.0	mg/kg	03.12.18 09.43		1
Total TPH	PHC635	352	15.0	mg/kg	03.12.18 09.43		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	03.12.18 09.43	
o-Terphenyl	84-15-1	96	%	70-135	03.12.18 09.43	



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS4
Lab Sample Id: 578592-004

Matrix: Soil
Date Collected: 03.06.18 11.15

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.15

Basis: Wet Weight

Seq Number: 3043357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	03.11.18 09.05	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
Total BTEX		<0.00201	0.00201	mg/kg	03.11.18 09.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	83	%	70-130	03.11.18 09.05		
4-Bromofluorobenzene	460-00-4	104	%	70-130	03.11.18 09.05		



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS5 Matrix: Soil Date Received: 03.07.18 15.08
 Lab Sample Id: 578592-005 Date Collected: 03.06.18 11.25 Sample Depth: 6 In
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: OJS % Moisture:
 Analyst: OJS Date Prep: 03.12.18 15.00 Basis: Wet Weight
 Seq Number: 3043628

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	343	4.97	mg/kg	03.13.18 18.49		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 03.10.18 16.00 Basis: Wet Weight
 Seq Number: 3043517

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	03.12.18 10.03	U	1
Diesel Range Organics (DRO)	C10C28DRO	381	15.0	mg/kg	03.12.18 10.03		1
Oil Range Hydrocarbons (ORO)	PHCG2835	105	15.0	mg/kg	03.12.18 10.03		1
Total TPH	PHC635	486	15.0	mg/kg	03.12.18 10.03		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	03.12.18 10.03	
o-Terphenyl	84-15-1	78	%	70-135	03.12.18 10.03	



Certificate of Analytical Results 578592



LT Environmental, Inc., Arvada, CO

PLU #320 2RP-3788

Sample Id: SS5
Lab Sample Id: 578592-005

Matrix: Soil
Date Collected: 03.06.18 11.25

Date Received: 03.07.18 15.08
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 03.10.18 12.15

Basis: Wet Weight

Seq Number: 3043357

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	03.11.18 10.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	03.11.18 10.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	03.11.18 10.03		
4-Bromofluorobenzene	460-00-4	124	%	70-130	03.11.18 10.03		



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 #320 2RP-3788

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

MB Sample Id: 7640640-1-BLK

Matrix: Solid

LCS Sample Id: 7640640-1-BKS

Prep Method: E300P

Date Prep: 03.12.18

LCSD Sample Id: 7640640-1-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	240	96	254	102	90-110	6	20	mg/kg	03.13.18 07:33	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

Parent Sample Id: 578591-004

Matrix: Soil

MS Sample Id: 578591-004 S

Prep Method: E300P

Date Prep: 03.12.18

MSD Sample Id: 578591-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	270	247	533	106	529	105	90-110	1	20	mg/kg	03.13.18 08:00	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3043628

Parent Sample Id: 578593-001

Matrix: Soil

MS Sample Id: 578593-001 S

Prep Method: E300P

Date Prep: 03.12.18

MSD Sample Id: 578593-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	263	105	261	104	90-110	1	20	mg/kg	03.13.18 19:00	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043517

MB Sample Id: 7640555-1-BLK

Matrix: Solid

LCS Sample Id: 7640555-1-BKS

Prep Method: TX1005P

Date Prep: 03.10.18

LCSD Sample Id: 7640555-1-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	939	94	1050	105	70-135	11	35	mg/kg	03.11.18 11:45	
Diesel Range Organics (DRO)	<15.0	1000	830	83	930	93	70-135	11	35	mg/kg	03.11.18 11:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		85		107		70-135	%	03.11.18 11:45
o-Terphenyl	91		85		99		70-135	%	03.11.18 11:45

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

$[D] = 100 * (C-A) / B$
 $RPD = 200 * | (C-E) / (C+E) |$
 $[D] = 100 * (C) / [B]$

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 #320 2RP-3788

Analytical Method: TPH by SW8015 Mod

Seq Number: 3043517

Parent Sample Id: 578121-001

Matrix: Soil

MS Sample Id: 578121-001 S

Prep Method: TX1005P

Date Prep: 03.10.18

MSD Sample Id: 578121-001 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	893	89	877	88	70-135	2	35	mg/kg	03.11.18 12:49	
Diesel Range Organics (DRO)	31.1	999	802	77	801	77	70-135	0	35	mg/kg	03.11.18 12:49	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		96		70-135	%	03.11.18 12:49
o-Terphenyl	84		81		70-135	%	03.11.18 12:49

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043356

MB Sample Id: 7640532-1-BLK

Matrix: Solid

LCS Sample Id: 7640532-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.18

LCSD Sample Id: 7640532-1-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	0.0902	90	0.0860	86	70-130	5	35	mg/kg	03.10.18 12:07	
Toluene	<0.00200	0.0998	0.0963	96	0.0922	92	70-130	4	35	mg/kg	03.10.18 12:07	
Ethylbenzene	<0.00200	0.0998	0.110	110	0.105	105	70-130	5	35	mg/kg	03.10.18 12:07	
m,p-Xylenes	<0.00399	0.200	0.217	109	0.207	104	70-130	5	35	mg/kg	03.10.18 12:07	
o-Xylene	<0.00200	0.0998	0.106	106	0.101	101	70-130	5	35	mg/kg	03.10.18 12:07	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		92		86		70-130	%	03.10.18 12:07
4-Bromofluorobenzene	106		110		113		70-130	%	03.10.18 12:07

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043357

MB Sample Id: 7640559-1-BLK

Matrix: Solid

LCS Sample Id: 7640559-1-BKS

Prep Method: SW5030B

Date Prep: 03.10.18

LCSD Sample Id: 7640559-1-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	0.0790	78	0.0735	74	70-130	7	35	mg/kg	03.10.18 22:25	
Toluene	<0.00202	0.101	0.0845	84	0.0783	78	70-130	8	35	mg/kg	03.10.18 22:25	
Ethylbenzene	<0.00202	0.101	0.0942	93	0.0897	90	70-130	5	35	mg/kg	03.10.18 22:25	
m,p-Xylenes	<0.00403	0.202	0.185	92	0.178	89	70-130	4	35	mg/kg	03.10.18 22:25	
o-Xylene	<0.00202	0.101	0.0937	93	0.0910	91	70-130	3	35	mg/kg	03.10.18 22:25	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	85		88		90		70-130	%	03.10.18 22:25
4-Bromofluorobenzene	98		114		111		70-130	%	03.10.18 22:25

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

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

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 #320 2RP-3788

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043356

Parent Sample Id: 578592-001

Matrix: Soil

MS Sample Id: 578592-001 S

Prep Method: SW5030B

Date Prep: 03.10.18

MSD Sample Id: 578592-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0443	44	0.0412	41	70-130	7	35	mg/kg	03.10.18 12:46	X
Toluene	<0.00202	0.101	0.0382	38	0.0279	28	70-130	31	35	mg/kg	03.10.18 12:46	X
Ethylbenzene	<0.00202	0.101	0.0304	30	0.0219	22	70-130	33	35	mg/kg	03.10.18 12:46	X
m,p-Xylenes	<0.00404	0.202	0.0650	32	0.0364	18	70-130	56	35	mg/kg	03.10.18 12:46	XF
o-Xylene	<0.00202	0.101	0.0301	30	0.0221	22	70-130	31	35	mg/kg	03.10.18 12:46	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	77		110		70-130	%	03.10.18 12:46
4-Bromofluorobenzene	72		116		70-130	%	03.10.18 12:46

Analytical Method: BTEX by EPA 8021B

Seq Number: 3043357

Parent Sample Id: 578592-004

Matrix: Soil

MS Sample Id: 578592-004 S

Prep Method: SW5030B

Date Prep: 03.10.18

MSD Sample Id: 578592-004 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	0.0663	66	0.0629	63	70-130	5	35	mg/kg	03.10.18 23:03	X
Toluene	<0.00200	0.100	0.0526	53	0.0525	53	70-130	0	35	mg/kg	03.10.18 23:03	X
Ethylbenzene	<0.00200	0.100	0.0272	27	0.0384	38	70-130	34	35	mg/kg	03.10.18 23:03	X
m,p-Xylenes	<0.00401	0.200	0.0530	27	0.0707	35	70-130	29	35	mg/kg	03.10.18 23:03	X
o-Xylene	<0.00200	0.100	0.0283	28	0.0372	37	70-130	27	35	mg/kg	03.10.18 23:03	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	86		92		70-130	%	03.10.18 23:03
4-Bromofluorobenzene	103		106		70-130	%	03.10.18 23:03

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

$[D] = 100 * (C - A) / B$
 $RPD = 200 * |(C - E) / (C + E)|$
 $[D] = 100 * (C) / [B]$

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

Page 1 of 1[illegible]



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/07/2018 03:08:00 PM

Work Order #: 578592

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)?	2.4	
#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?	No	TPH received in bulk jars
#13 Samples properly preserved?	Yes	
#14 Sample container(s) intact?	Yes	
#15 Sufficient sample amount for indicated test(s)?	Yes	
#16 All samples received within hold time?	Yes	
#17 Subcontract of sample(s)?	No	
#18 Water VOC samples have zero headspace?	N/A	

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Connie Hernandez

Date: 03/08/2018

Checklist reviewed by:

Jessica Kramer

Date: 03/08/2018



18-JUL-18

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

Reference: XENCO Report No(s): **591024**
PLU 320H
Project Address: 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) 591024. 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. 591024 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 591024****LT Environmental, Inc., Arvada, CO**

PLU 320H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS1A	S	06-27-18 14:00	3 ft	591024-001
SS2A	S	06-27-18 14:15	2 ft	591024-002
SS3A	S	06-28-18 13:30	1 ft	591024-003
SS4A	S	06-27-18 14:30	2 ft	591024-004
SS6	S	06-28-18 13:35	1 ft	591024-005
SS7	S	06-28-18 13:40	1 ft	591024-006
SS8	S	06-28-18 13:45	1 ft	591024-007
SS9	S	06-28-18 13:50	2 ft	591024-008
SS10	S	06-28-18 13:55	2 ft	591024-009
SS11	S	06-28-18 14:00	2 ft	591024-010
SS12	S	06-28-18 14:05	2 ft	591024-011
SS13	S	06-28-18 14:10	2 ft	591024-012
SS14	S	06-28-18 14:15	1 ft	591024-013
SS15	S	06-28-18 14:20	6 ft	591024-014



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 320H

Project ID: 012918082

Work Order Number(s): 591024

Report Date: 18-JUL-18

Date Received: 07/02/2018

Sample receipt non conformance and comments:

Per clients email, corrected sample date/time for sample 004 from 06/28/18 1430 to 06/27/18 1430 JKR 07/18/18. NEW VERSION GENERATED

Sample receipt non conformance and comments per sample:

None

Analytical non conformance and comments:

Batch: LBA-3055790 BTEX by EPA 8021B

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

Batch: LBA-3055793 BTEX by EPA 8021B

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

Batch: LBA-3055798 BTEX by EPA 8021B

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



Certificate of Analysis Summary 591024

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H

Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Jul-02-18 09:00 am
Report Date: 18-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591024-001	591024-002	591024-003	591024-004	591024-005	591024-006
	<i>Field Id:</i>	SS1A	SS2A	SS3A	SS4A	SS6	SS7
	<i>Depth:</i>	3- ft	2- ft	1- ft	2- ft	1- ft	1- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-27-18 14:00	Jun-27-18 14:15	Jun-28-18 13:30	Jun-27-18 14:30	Jun-28-18 13:35	Jun-28-18 13:40
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-07-18 07:45	Jul-07-18 07:45	Jul-07-18 07:45	Jul-08-18 08:00	Jul-08-18 08:00	Jul-07-18 07:45
	<i>Analyzed:</i>	Jul-07-18 21:40	Jul-07-18 21:58	Jul-07-18 22:16	Jul-08-18 11:20	Jul-08-18 11:38	Jul-07-18 23:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00397 0.00397	<0.00399 0.00399	<0.00673 0.00673	<0.00664 0.00664	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00337 0.00337	<0.00332 0.00332	<0.00200 0.00200
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45
	<i>Analyzed:</i>	Jul-06-18 18:40	Jul-06-18 18:46	Jul-06-18 18:51	Jul-06-18 19:07	Jul-06-18 19:13	Jul-06-18 19:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		237 4.98	167 4.90	174 5.00	109 4.95	203 4.97	47.9 4.94
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00
	<i>Analyzed:</i>	Jul-07-18 20:01	Jul-07-18 20:59	Jul-07-18 21:19	Jul-07-18 21:38	Jul-07-18 21:58	Jul-07-18 22:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<14.9 14.9	<14.9 14.9	<15.0 15.0	<15.0 15.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591024

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H

Project Id: 012918082
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Mon Jul-02-18 09:00 am
Report Date: 18-JUL-18
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	591024-007	591024-008	591024-009	591024-010	591024-011	591024-012
	<i>Field Id:</i>	SS8	SS9	SS10	SS11	SS12	SS13
	<i>Depth:</i>	1- ft	2- ft	2- ft	2- ft	2- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-28-18 13:45	Jun-28-18 13:50	Jun-28-18 13:55	Jun-28-18 14:00	Jun-28-18 14:05	Jun-28-18 14:10
BTEX by EPA 8021B	<i>Extracted:</i>	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15	Jul-07-18 08:15
	<i>Analyzed:</i>	Jul-08-18 01:51	Jul-08-18 02:09	Jul-08-18 02:27	Jul-08-18 02:45	Jul-08-18 03:02	Jul-08-18 03:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00403 0.00403	<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00401 0.00401	<0.00402 0.00402
o-Xylene		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00202 0.00202	<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201
Inorganic Anions by EPA 300	<i>Extracted:</i>	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45	Jul-06-18 08:45
	<i>Analyzed:</i>	Jul-06-18 19:24	Jul-06-18 19:29	Jul-06-18 19:51	Jul-06-18 19:56	Jul-06-18 20:12	Jul-06-18 20:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		126 4.97	144 4.97	47.5 4.93	148 4.94	188 4.98	114 4.91
TPH by SW8015 Mod	<i>Extracted:</i>	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00	Jul-07-18 11:00
	<i>Analyzed:</i>	Jul-07-18 22:36	Jul-07-18 22:56	Jul-07-18 23:15	Jul-07-18 23:35	Jul-08-18 00:33	Jul-08-18 00:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg 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	<14.9 14.9
Diesel Range Organics (DRO)		<15.0 15.0	17.9 15.0	<15.0 15.0	27.2 15.0	<15.0 15.0	<14.9 14.9
Oil Range Hydrocarbons (ORO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<14.9 14.9
Total TPH		<15.0 15.0	17.9 15.0	<15.0 15.0	27.2 15.0	<15.0 15.0	<14.9 14.9

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 591024

LT Environmental, Inc., Arvada, CO

Project Name: PLU 320H

Project Id: 012918082
 Contact: Adrian Baker
 Project Location: NM

Date Received in Lab: Mon Jul-02-18 09:00 am
 Report Date: 18-JUL-18
 Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	591024-013	591024-014				
	Field Id:	SS14	SS15				
	Depth:	1- ft	6- ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Jun-28-18 14:15	Jun-28-18 14:20				
BTEX by EPA 8021B	Extracted:	Jul-07-18 08:15	Jul-07-18 08:15				
	Analyzed:	Jul-08-18 03:38	Jul-08-18 03:56				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00200 0.00200	<0.00198 0.00198				
	Toluene	<0.00200 0.00200	<0.00198 0.00198				
	Ethylbenzene	<0.00200 0.00200	<0.00198 0.00198				
	m,p-Xylenes	<0.00400 0.00400	<0.00397 0.00397				
	o-Xylene	<0.00200 0.00200	<0.00198 0.00198				
	Total Xylenes	<0.00200 0.00200	<0.00198 0.00198				
	Total BTEX	<0.00200 0.00200	<0.00198 0.00198				
Inorganic Anions by EPA 300	Extracted:	Jul-06-18 08:45	Jul-06-18 08:45				
	Analyzed:	Jul-06-18 20:23	Jul-06-18 20:28				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	91.8 4.94	122 4.98				
TPH by SW8015 Mod	Extracted:	Jul-07-18 11:00	Jul-07-18 11:00				
	Analyzed:	Jul-08-18 01:12	Jul-08-18 01:32				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<15.0 15.0				
	Diesel Range Organics (DRO)	27.0 15.0	<15.0 15.0				
	Oil Range Hydrocarbons (ORO)	<15.0 15.0	<15.0 15.0				
	Total TPH	27.0 15.0	<15.0 15.0				

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Jessica Kramer
 Project Assistant



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS1A**
Lab Sample Id: 591024-001

Matrix: Soil
Date Collected: 06.27.18 14.00

Date Received: 07.02.18 09.00
Sample Depth: 3 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055726

Date Prep: 07.06.18 08.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	237	4.98	mg/kg	07.06.18 18.40		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055923

Date Prep: 07.07.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 20.01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 20.01	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 20.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 20.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	07.07.18 20.01	
o-Terphenyl	84-15-1	90	%	70-135	07.07.18 20.01	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS1A
Lab Sample Id: 591024-001

Matrix: Soil
Date Collected: 06.27.18 14.00

Date Received: 07.02.18 09.00
Sample Depth: 3 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.07.18 21.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.18 21.40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	07.07.18 21.40		
4-Bromofluorobenzene	460-00-4	77	%	70-130	07.07.18 21.40		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS2A Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-002 Date Collected: 06.27.18 14.15 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	167	4.90	mg/kg	07.06.18 18.46		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 20.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 20.59	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 20.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 20.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 20.59	
o-Terphenyl	84-15-1	96	%	70-135	07.07.18 20.59	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS2A
Lab Sample Id: 591024-002

Matrix: Soil
Date Collected: 06.27.18 14.15

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.07.18 21.58	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.07.18 21.58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	85	%	70-130	07.07.18 21.58		
1,4-Difluorobenzene	540-36-3	91	%	70-130	07.07.18 21.58		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS3A Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-003 Date Collected: 06.28.18 13.30 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	174	5.00	mg/kg	07.06.18 18.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.07.18 21.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.07.18 21.19	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.07.18 21.19	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.07.18 21.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 21.19	
o-Terphenyl	84-15-1	93	%	70-135	07.07.18 21.19	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS3A
Lab Sample Id: 591024-003

Matrix: Soil
Date Collected: 06.28.18 13.30

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.18 22.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.18 22.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	70-130	07.07.18 22.16		
4-Bromofluorobenzene	460-00-4	82	%	70-130	07.07.18 22.16		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS4A**
Lab Sample Id: 591024-004

Matrix: Soil
Date Collected: 06.27.18 14.30

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055726

Date Prep: 07.06.18 08.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	4.95	mg/kg	07.06.18 19.07		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055923

Date Prep: 07.07.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.07.18 21.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.07.18 21.38	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.07.18 21.38	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.07.18 21.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.07.18 21.38	
o-Terphenyl	84-15-1	94	%	70-135	07.07.18 21.38	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS4A**
Lab Sample Id: 591024-004

Matrix: Soil
Date Collected: 06.27.18 14.30

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055798

Date Prep: 07.08.18 08.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
Toluene	108-88-3	<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
Ethylbenzene	100-41-4	<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
m,p-Xylenes	179601-23-1	<0.00673	0.00673	mg/kg	07.08.18 11.20	U	1
o-Xylene	95-47-6	<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
Total Xylenes	1330-20-7	<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
Total BTEX		<0.00337	0.00337	mg/kg	07.08.18 11.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	124	%	70-130	07.08.18 11.20		
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.08.18 11.20		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS6 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-005 Date Collected: 06.28.18 13.35 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	203	4.97	mg/kg	07.06.18 19.13		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 21.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 21.58	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 21.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 21.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.07.18 21.58	
o-Terphenyl	84-15-1	95	%	70-135	07.07.18 21.58	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS6
Lab Sample Id: 591024-005

Matrix: Soil
Date Collected: 06.28.18 13.35

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.08.18 08.00

Basis: Wet Weight

Seq Number: 3055798

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
Toluene	108-88-3	<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
Ethylbenzene	100-41-4	<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
m,p-Xylenes	179601-23-1	<0.00664	0.00664	mg/kg	07.08.18 11.38	U	1
o-Xylene	95-47-6	<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
Total Xylenes	1330-20-7	<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
Total BTEX		<0.00332	0.00332	mg/kg	07.08.18 11.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	75	%	70-130	07.08.18 11.38		
4-Bromofluorobenzene	460-00-4	74	%	70-130	07.08.18 11.38		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS7 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-006 Date Collected: 06.28.18 13.40 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	47.9	4.94	mg/kg	07.06.18 19.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 22.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 22.17	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 22.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 22.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.07.18 22.17	
o-Terphenyl	84-15-1	96	%	70-135	07.07.18 22.17	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS7
Lab Sample Id: 591024-006

Matrix: Soil
Date Collected: 06.28.18 13.40

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 07.45

Basis: Wet Weight

Seq Number: 3055790

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.07.18 23.10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.07.18 23.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	07.07.18 23.10		
4-Bromofluorobenzene	460-00-4	84	%	70-130	07.07.18 23.10		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS8** Matrix: **Soil** Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-007 Date Collected: 06.28.18 13.45 Sample Depth: 1 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: **SCM** % Moisture:
 Analyst: **SCM** Date Prep: 07.06.18 08.45 Basis: **Wet Weight**
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	126	4.97	mg/kg	07.06.18 19.24		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: **ARM** % Moisture:
 Analyst: **ARM** Date Prep: 07.07.18 11.00 Basis: **Wet Weight**
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 22.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 22.36	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 22.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 22.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.07.18 22.36	
o-Terphenyl	84-15-1	98	%	70-135	07.07.18 22.36	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS8
Lab Sample Id: 591024-007

Matrix: Soil
Date Collected: 06.28.18 13.45

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	07.08.18 01.51	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
Total BTEX		<0.00202	0.00202	mg/kg	07.08.18 01.51	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	85		%	70-130	07.08.18 01.51	
1,4-Difluorobenzene	540-36-3	83		%	70-130	07.08.18 01.51	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS9 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-008 Date Collected: 06.28.18 13.50 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	144	4.97	mg/kg	07.06.18 19.29		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 22.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	17.9	15.0	mg/kg	07.07.18 22.56		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 22.56	U	1
Total TPH	PHC635	17.9	15.0	mg/kg	07.07.18 22.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	07.07.18 22.56	
o-Terphenyl	84-15-1	98	%	70-135	07.07.18 22.56	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS9
Lab Sample Id: 591024-008

Matrix: Soil
Date Collected: 06.28.18 13.50

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 02.09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 02.09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.08.18 02.09		
4-Bromofluorobenzene	460-00-4	79	%	70-130	07.08.18 02.09		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS10** Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-009 Date Collected: 06.28.18 13.55 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	47.5	4.93	mg/kg	07.06.18 19.51		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 23.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.07.18 23.15	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 23.15	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.07.18 23.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	07.07.18 23.15	
o-Terphenyl	84-15-1	89	%	70-135	07.07.18 23.15	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS10**
Lab Sample Id: 591024-009

Matrix: Soil
Date Collected: 06.28.18 13.55

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	07.08.18 02.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	07.08.18 02.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	81	%	70-130	07.08.18 02.27		
1,4-Difluorobenzene	540-36-3	86	%	70-130	07.08.18 02.27		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS11**
Lab Sample Id: 591024-010

Matrix: Soil
Date Collected: 06.28.18 14.00

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055726

Date Prep: 07.06.18 08.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	148	4.94	mg/kg	07.06.18 19.56		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055923

Date Prep: 07.07.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.07.18 23.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	27.2	15.0	mg/kg	07.07.18 23.35		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.07.18 23.35	U	1
Total TPH	PHC635	27.2	15.0	mg/kg	07.07.18 23.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	07.07.18 23.35	
o-Terphenyl	84-15-1	102	%	70-135	07.07.18 23.35	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS11**
Lab Sample Id: 591024-010

Matrix: Soil
Date Collected: 06.28.18 14.00

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	07.08.18 02.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.18 02.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	88	%	70-130	07.08.18 02.45		
4-Bromofluorobenzene	460-00-4	77	%	70-130	07.08.18 02.45		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS12 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-011 Date Collected: 06.28.18 14.05 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	188	4.98	mg/kg	07.06.18 20.12		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 00.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 00.33	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 00.33	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 00.33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	93	%	70-135	07.08.18 00.33		
o-Terphenyl	84-15-1	95	%	70-135	07.08.18 00.33		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS12
Lab Sample Id: 591024-011

Matrix: Soil
Date Collected: 06.28.18 14.05

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.08.18 03.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.18 03.02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	71	%	70-130	07.08.18 03.02		
1,4-Difluorobenzene	540-36-3	99	%	70-130	07.08.18 03.02		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS13 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-012 Date Collected: 06.28.18 14.10 Sample Depth: 2 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	114	4.91	mg/kg	07.06.18 20.18		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.08.18 00.53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	07.08.18 00.53	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	07.08.18 00.53	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	07.08.18 00.53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	07.08.18 00.53		
o-Terphenyl	84-15-1	101	%	70-135	07.08.18 00.53		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS13
Lab Sample Id: 591024-012

Matrix: Soil
Date Collected: 06.28.18 14.10

Date Received: 07.02.18 09.00
Sample Depth: 2 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.08.18 03.20	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.08.18 03.20	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	07.08.18 03.20		
4-Bromofluorobenzene	460-00-4	75	%	70-130	07.08.18 03.20		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS14**
Lab Sample Id: 591024-013

Matrix: Soil
Date Collected: 06.28.18 14.15

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300

Tech: SCM

Analyst: SCM

Seq Number: 3055726

Date Prep: 07.06.18 08.45

Prep Method: E300P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	91.8	4.94	mg/kg	07.06.18 20.23		1

Analytical Method: TPH by SW8015 Mod

Tech: ARM

Analyst: ARM

Seq Number: 3055923

Date Prep: 07.07.18 11.00

Prep Method: TX1005P

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 01.12	U	1
Diesel Range Organics (DRO)	C10C28DRO	27.0	15.0	mg/kg	07.08.18 01.12		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 01.12	U	1
Total TPH	PHC635	27.0	15.0	mg/kg	07.08.18 01.12		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	07.08.18 01.12	
o-Terphenyl	84-15-1	97	%	70-135	07.08.18 01.12	



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: **SS14**
Lab Sample Id: 591024-013

Matrix: Soil
Date Collected: 06.28.18 14.15

Date Received: 07.02.18 09.00
Sample Depth: 1 ft

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3055793

Date Prep: 07.07.18 08.15

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.08.18 03.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.08.18 03.38	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	91	%	70-130	07.08.18 03.38		
1,4-Difluorobenzene	540-36-3	93	%	70-130	07.08.18 03.38		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS15 Matrix: Soil Date Received: 07.02.18 09.00
 Lab Sample Id: 591024-014 Date Collected: 06.28.18 14.20 Sample Depth: 6 ft
 Analytical Method: Inorganic Anions by EPA 300 Prep Method: E300P
 Tech: SCM % Moisture:
 Analyst: SCM Date Prep: 07.06.18 08.45 Basis: Wet Weight
 Seq Number: 3055726

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	122	4.98	mg/kg	07.06.18 20.28		1

Analytical Method: TPH by SW8015 Mod Prep Method: TX1005P
 Tech: ARM % Moisture:
 Analyst: ARM Date Prep: 07.07.18 11.00 Basis: Wet Weight
 Seq Number: 3055923

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.08.18 01.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	07.08.18 01.32	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	07.08.18 01.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	07.08.18 01.32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	07.08.18 01.32		
o-Terphenyl	84-15-1	95	%	70-135	07.08.18 01.32		



Certificate of Analytical Results 591024



LT Environmental, Inc., Arvada, CO

PLU 320H

Sample Id: SS15
Lab Sample Id: 591024-014

Matrix: Soil
Date Collected: 06.28.18 14.20

Date Received: 07.02.18 09.00
Sample Depth: 6 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: ALJ

% Moisture:

Analyst: ALJ

Date Prep: 07.07.18 08.15

Basis: Wet Weight

Seq Number: 3055793

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	07.08.18 03.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	07.08.18 03.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	79	%	70-130	07.08.18 03.56		
1,4-Difluorobenzene	540-36-3	118	%	70-130	07.08.18 03.56		



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 320H

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

MB Sample Id: 7657951-1-BLK

Matrix: Solid

LCS Sample Id: 7657951-1-BKS

Prep Method: E300P

Date Prep: 07.06.18

LCSD Sample Id: 7657951-1-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	267	107	271	108	90-110	1	20	mg/kg	07.06.18 18:08	

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-002

Matrix: Soil

MS Sample Id: 591023-002 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.95	248	273	110	275	111	90-110	1	20	mg/kg	07.06.18 18:24	X

Analytical Method: Inorganic Anions by EPA 300

Seq Number: 3055726

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: E300P

Date Prep: 07.06.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	256	102	256	102	90-110	0	20	mg/kg	07.06.18 19:40	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055923

MB Sample Id: 7658082-1-BLK

Matrix: Solid

LCS Sample Id: 7658082-1-BKS

Prep Method: TX1005P

Date Prep: 07.07.18

LCSD Sample Id: 7658082-1-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	1000	100	991	99	70-135	1	20	mg/kg	07.07.18 19:22	
Diesel Range Organics (DRO)	<15.0	1000	1050	105	1030	103	70-135	2	20	mg/kg	07.07.18 19:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		119		122		70-135	%	07.07.18 19:22
o-Terphenyl	108		115		112		70-135	%	07.07.18 19:22

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 320H

Analytical Method: TPH by SW8015 Mod

Seq Number: 3055923

Parent Sample Id: 591024-001

Matrix: Soil

MS Sample Id: 591024-001 S

Prep Method: TX1005P

Date Prep: 07.07.18

MSD Sample Id: 591024-001 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	997	952	95	948	95	70-135	0	20	mg/kg	07.07.18 20:20	
Diesel Range Organics (DRO)	<15.0	997	1070	107	1060	106	70-135	1	20	mg/kg	07.07.18 20:20	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		116		70-135	%	07.07.18 20:20
o-Terphenyl	98		98		70-135	%	07.07.18 20:20

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

MB Sample Id: 7657996-1-BLK

Matrix: Solid

LCS Sample Id: 7657996-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.18

LCSD Sample Id: 7657996-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0928	93	0.0923	91	70-130	1	35	mg/kg	07.07.18 15:05	
Toluene	<0.00201	0.100	0.0940	94	0.0945	94	70-130	1	35	mg/kg	07.07.18 15:05	
Ethylbenzene	<0.00201	0.100	0.0936	94	0.0934	92	70-130	0	35	mg/kg	07.07.18 15:05	
m,p-Xylenes	<0.00402	0.201	0.189	94	0.195	97	70-130	3	35	mg/kg	07.07.18 15:05	
o-Xylene	<0.00201	0.100	0.0891	89	0.0988	98	70-130	10	35	mg/kg	07.07.18 15:05	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		101		99		70-130	%	07.07.18 15:05
4-Bromofluorobenzene	88		80		88		70-130	%	07.07.18 15:05

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055793

MB Sample Id: 7657998-1-BLK

Matrix: Solid

LCS Sample Id: 7657998-1-BKS

Prep Method: SW5030B

Date Prep: 07.07.18

LCSD Sample Id: 7657998-1-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	0.0980	98	0.0755	75	70-130	26	35	mg/kg	07.07.18 23:46	
Toluene	<0.00200	0.100	0.0971	97	0.0739	73	70-130	27	35	mg/kg	07.07.18 23:46	
Ethylbenzene	<0.00200	0.100	0.0900	90	0.0759	75	70-130	17	35	mg/kg	07.07.18 23:46	
m,p-Xylenes	<0.00401	0.200	0.185	93	0.153	76	70-130	19	35	mg/kg	07.07.18 23:46	
o-Xylene	<0.00200	0.100	0.0912	91	0.0721	71	70-130	23	35	mg/kg	07.07.18 23:46	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	111		88		74		70-130	%	07.07.18 23:46
4-Bromofluorobenzene	81		77		70		70-130	%	07.07.18 23:46

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 320H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055798

MB Sample Id: 7658000-1-BLK

Matrix: Solid

LCS Sample Id: 7658000-1-BKS

Prep Method: SW5030B

Date Prep: 07.08.18

LCSD Sample Id: 7658000-1-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	0.104	104	0.0859	85	70-130	19	35	mg/kg	07.08.18 08:22	
Toluene	<0.00200	0.100	0.107	107	0.0893	88	70-130	18	35	mg/kg	07.08.18 08:22	
Ethylbenzene	<0.00200	0.100	0.108	108	0.0885	88	70-130	20	35	mg/kg	07.08.18 08:22	
m,p-Xylenes	<0.00401	0.200	0.221	111	0.181	90	70-130	20	35	mg/kg	07.08.18 08:22	
o-Xylene	<0.00200	0.100	0.104	104	0.0863	85	70-130	19	35	mg/kg	07.08.18 08:22	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		91		93		70-130	%	07.08.18 08:22
4-Bromofluorobenzene	73		85		82		70-130	%	07.08.18 08:22

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055790

Parent Sample Id: 591023-003

Matrix: Soil

MS Sample Id: 591023-003 S

Prep Method: SW5030B

Date Prep: 07.07.18

MSD Sample Id: 591023-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0834	83	0.0819	81	70-130	2	35	mg/kg	07.07.18 15:41	
Toluene	<0.00200	0.100	0.0840	84	0.0776	77	70-130	8	35	mg/kg	07.07.18 15:41	
Ethylbenzene	<0.00200	0.100	0.0815	82	0.0771	76	70-130	6	35	mg/kg	07.07.18 15:41	
m,p-Xylenes	<0.00401	0.200	0.165	83	0.157	78	70-130	5	35	mg/kg	07.07.18 15:41	
o-Xylene	<0.00200	0.100	0.0793	79	0.0763	76	70-130	4	35	mg/kg	07.07.18 15:41	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	110		83		70-130	%	07.07.18 15:41
4-Bromofluorobenzene	83		78		70-130	%	07.07.18 15:41

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055793

Parent Sample Id: 591118-002

Matrix: Soil

MS Sample Id: 591118-002 S

Prep Method: SW5030B

Date Prep: 07.07.18

MSD Sample Id: 591118-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0888	89	0.0720	72	70-130	21	35	mg/kg	07.08.18 00:21	
Toluene	<0.00201	0.100	0.0758	76	0.0642	64	70-130	17	35	mg/kg	07.08.18 00:21	X
Ethylbenzene	<0.00201	0.100	0.0475	48	0.0346	35	70-130	31	35	mg/kg	07.08.18 00:21	X
m,p-Xylenes	<0.00402	0.201	0.117	58	0.0843	42	70-130	32	35	mg/kg	07.08.18 00:21	X
o-Xylene	<0.00201	0.100	0.0658	66	0.0563	57	70-130	16	35	mg/kg	07.08.18 00:21	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	124		78		70-130	%	07.08.18 00:21
4-Bromofluorobenzene	101		78		70-130	%	07.08.18 00:21

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 320H

Analytical Method: BTEX by EPA 8021B

Seq Number: 3055798

Parent Sample Id: 591031-011

Matrix: Soil

MS Sample Id: 591031-011 S

Prep Method: SW5030B

Date Prep: 07.08.18

MSD Sample Id: 591031-011 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	0.0980	97	0.0845	85	70-130	15	35	mg/kg	07.08.18 08:58	
Toluene	<0.00202	0.101	0.0955	95	0.0816	82	70-130	16	35	mg/kg	07.08.18 08:58	
Ethylbenzene	<0.00202	0.101	0.0927	92	0.0836	84	70-130	10	35	mg/kg	07.08.18 08:58	
m,p-Xylenes	<0.00403	0.202	0.192	95	0.171	85	70-130	12	35	mg/kg	07.08.18 08:58	
o-Xylene	<0.00202	0.101	0.0887	88	0.0788	79	70-130	12	35	mg/kg	07.08.18 08:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		126		70-130	%	07.08.18 08:58
4-Bromofluorobenzene	90		104		70-130	%	07.08.18 08:58

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

Page 1 of 2

Revision 2016.1

Setting the Standard since 1990

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

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes			
Company Name / Branch: IT Environmental - Permian Office				Project Name/Number: PLU 300 it / 01296082											
Company Address: 3300 N. A St. Box 2 Unit 103 Midland TX				Project Location: NM											
Email: Abaker@itenv 4327045178				Phone No: 4327045178				Invoice To: FTG Energy - Kyle Little							
Project Contact: Adrian Baker				PO Number: 288-3788											
Sampler's Name: Daniel Thomas															
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments
1	SS1A	3'	6-27	1400	Soil	1									
2	SS2A	2'	6-27	1415											
3	SS3A	1'	6-28	1330											
4	SS4A	2'	6-27	1430											
5	SS6	1'	6-28	1335											
6	SS7	1'	6-28	1340											
7	SS8	1'	6-28	1345											
8	SS9	2'	6-28	1350											
9	SS10	2'	6-28	1355											
10	SS11	2'	6-28	1400											
Turnaround Time (Business days) _____ Data Deliverable Information _____ Notes: _____															
☐ Same Day TAT ☐ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Plg / raw data)															
☐ Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC+ Forms ☐ TRRP Level IV															
☐ 2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG 411															
☐ 3 Day EMERGENCY ☐ Level II Report with TRRP checklist															
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															
Relinquished By Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
1		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
3		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
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Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:	
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5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/28/18 1737	
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5		6/28/18 1730		6/28/18 1737		6/28/18 1737		6/28/18 1737		6/					

Stafford, TX (281) 240-4200
Dallas, TX (214) 902-0300

El Paso, TX (915) 585-3443
Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440
San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900
Service Center - Baton Rouge

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

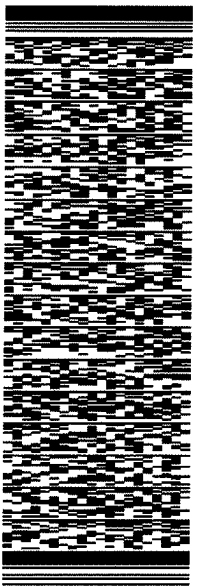
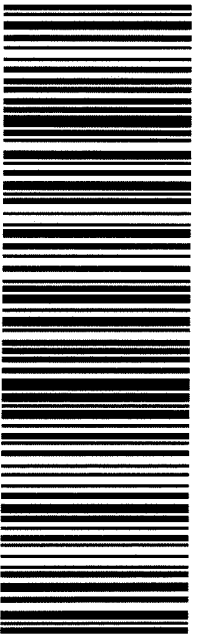
CHAIN OF CUSTODY

Page 2 Of 2

Revision 2016.1

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes					
Company Name / Branch: Environmental - Pension Office				Project Name/Number: PLV 320 H / 012918082													
Company Address: 3300 N 1st St, Bldg 1, Unit 103, Meriden, CT				Project Location: NM													
Email: Abdullah@kenum.com Phone No: 4327015178				Invoice To: KTG Energy - Kyle Littell													
Project Contact: Adrian Baker				PO Number: 288 - 3788													
Sampler's Name: Daniel Thomas																	
No.	Field ID / Point of Collection	Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Field Comments	
1	SS12		2'	6-28	1405	5.0	1									X X X X	
2	SS13		2'		1410		1									X X X X	
3	SS14		1'		1415		1									X X X X	
4	SS15		6"		1420		1									X X X X	
5																	
6																	
7																	
8																	
9																	
10																	
Turnaround Time (Business days)				Data Deliverable Information				Notes:									
☐ Same Day TAT				☐ Level II Std QC				☐ Level IV (Full Data Pkg / raw data)									
☐ Next Day EMERGENCY				☐ Level III Std QC + Forms				☐ TRRP Level IV									
☐ 2 Day EMERGENCY				☐ Contract TAT				☐ Level 3 (CLP Forms)				☐ UST / RG - 411					
☐ 3 Day EMERGENCY				☒ Level II Report with TRRP checklist													
TAT Starts Day received by Lab, if received by 5:00 pm																	
Relinquished By Sample: [Signature] Date Time: 6/28/17 30				Received By: [Signature] Date Time: 6/29/17 15:30				Relinquished By: [Signature] Date Time: 6/29/17 15:30				Received By: [Signature] Date Time: 6/29/17 15:30					
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Relinquished By: [Signature] Date Time: 6/28/17 30				Received By: [Signature] Date Time: 6/29/17 15:30				Relinquished By: [Signature] Date Time: 6/29/17 15:30				Received By: [Signature] Date Time: 6/29					

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.

ORIGIN ID:MAFA (806) 794-1296 XENCO 1211 W. FLORIDA AVE MIDLAND, TX 79701 UNITED STATES US		SHIP DATE: 29 JUN 18 ACT WT: 40.00 LB CAD: 101813/06/NET3980 DIMS: 25x15x16 IN BILL RECIPIENT
TO XENCO FEDEX OFFICE PRINT & SHIP CENTER FEDEX OFFICE PRINT & SHIP CENTER 200 W INTERSTATE 20 MIDLAND TX 79701 REF: (806) 794-1296 INV: PO: DEPT:		
 		
TRK# 7726 0705 2739 0201	SATURDAY HOLD PRIORITY OVERNIGHT HLD MAFKI TX-US LBB	41 MAFA 

552J293DF/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.

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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.



Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/02/2018 09:00:00 AM

Work Order #: 591024

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)?	3.2
#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: 07/02/2018

Checklist reviewed by:

Jessica Kramer

Date: 07/02/2018

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

COMMENTS

Action 199282

COMMENTS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199282
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

COMMENTS

Created By	Comment	Comment Date
amaxwell	Historical document upload.	3/21/2023

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
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CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/21/2023