LT Environmental, Inc.
3300 North A Street, Building 1, #103
Midland, Texas 79705
432.704.5178

October 22, 2018

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Closure Request
Poker Lake Unit 68 Tank Battery
Remediation Permit Number 2RP-2986 and 2RP-2987
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 excavation of impacted soil and confirmation soil sampling activities at the Poker Lake Unit (PLU) 68 tank battery (Site) in Unit Letter B, Section 20, Township 24 South, Range 31 East, in Eddy County, New Mexico (Figure 1). The purpose of the excavation activities was to address impacts to soil after two separate events caused the release of crude oil and produced water in the processing equipment containment area.

On April 19, 2015, a flow line developed a leak due to external corrosion, causing a release of approximately 8 barrels (bbls) of crude oil and 46 bbls of produced water. The spill impacted approximately 4,165 square feet of the process equipment earthen containment area. Free-standing liquid was removed with a vacuum truck; approximately 2 bbls of crude oil and 8 bbls of produced water were recovered. 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 May 1, 2015 and was assigned Remediation Permit Number (RP) 2RP-2987 (Attachment 1).

On April 26, 2015, an unauthorized person cut and removed seals and opened a closed valve connected to an open-ended four-inch diameter poly flowline. The flowline had been used to supply produced water to drilling operations. The actions caused a release of approximately 269 bbls of produced water. The spill impacted approximately 11,000 square feet of the process equipment earthen containment area. Free-standing liquid was removed with a vacuum truck; approximately 200 bbls of produced water were recovered. The former operator reported the release to the NMOCD on a separate Form C-141 on May 1, 2015, and was assigned RP number: 2RP-2986 (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 both releases occurred within the process equipment containment berm, the sampling and excavation activities were completed to address and close both releases simultaneously. Based

on the results of the confirmation soil sampling events conducted after impacted soil was removed, 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 02110, located approximately 3.3 miles west of the Site, with a depth to groundwater of 400 feet bgs and a total depth of 600 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 a stock pond located approximately 0.96 miles northwest of the Site. Based on these criteria, the NMOCD site ranking for remediation action levels is 0, and the following remediation action levels apply: 10 milligrams per kilogram (mg/kg) benzene; 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX); and 5,000 mg/kg total petroleum hydrocarbons (TPH). Based on standard practice in this region, LTE proposes a site-specific chloride action level of 600 mg/kg or within 10 percent (%) of the background concentrations.

PRELIMINARY SOIL SAMPLING

On January 4, 2018, an LTE scientist collected ten soil samples (SS-1 through SS-10) from a depth of 0.5 feet bgs to assess the lateral extent of soil impact. The soil sample locations, depicted on Figure 2, were based on information provided on both initial Form C-141s and field observations. 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. No Hydrocarbon odor was detected or soil staining observed at the Site. 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 delivered at 4 degrees Celsius (°C) under strict chain-of-custody procedures to ESC Lab Sciences in Mount Juliet, Tennessee, for laboratory 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 SW8015 Modified, and chloride by EPA Method 300.

Laboratory analytical results indicated one soil sample (SS-1) exceeded the NMOCD site-specific remediation action level for TPH and two soil samples (SS-5 and SS-8) exceeded the remediation action level for chloride. Analytical results are depicted on Figure 2 and summarized in Table 1, and the laboratory analytical report is included in Attachment 2.

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 in initial soil samples SS-1, SS-5, and SS-8. To delineate

hydrocarbon and chloride impacts to soil and direct excavation activities, LTE screened soil using a PID and Hach® chloride QuanTab® test strips. Excavation activities commenced on June 13, 2018 and concluded on June 19, 2018. Impacted soil was removed from the release area to a depth of 0.5 feet bgs to 2 feet bgs by hydro excavation. The southern portion of the impacted area was mechanically excavated to a depth of 5 feet bgs. Please note that the excavation and confirmation soil samples associated with the excavation north of the containment berm were not associated with these releases. However, as a best management practice, visually stained soil was identified and excavated and confirmation soil samples (SS3A, SS13, SS14, and SS15) were collected.

Upon completion of excavation activities, LTE collected confirmation soil samples SS11 through SS21, SS1A, SS3A, SS5A, SS8A, FS1, and SW1 through SW4 from the final excavation extent. The soil samples were collected and handled as previously described and submitted to Xenco Laboratories in Midland, Texas. Analytical results are depicted on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

The excavation measured approximately 11,000 square feet around the process equipment with a depth of 0.5 feet to five feet bgs at the southern end of the excavation, where the spilled fluid pooled inside the containment. Approximately 180 cubic yards of impacted soil were removed from the excavation. The impacted soil was transported and properly disposed of at the R360 Landfarm, in Hobbs, New Mexico.

ANALYTICAL RESULTS

Laboratory analytical results confirmed that all soil samples collected from the final excavation extents (SS11 through SS21, SS1A, SS3A, SS5A, SS8A, FS1, and SW1 through SW4) were compliant with the NMOCD site-specific remediation action levels for BTEX, TPH, and chloride. Laboratory analytical results indicated initial soil sample SS-1 exceeded the NMOCD remediation action level for TPH. The area around initial sample SS-1 was excavated and subsequent soil sample SS1A indicated the TPH concentration was compliant with the NMOCD remediation action level. Initial soil samples SS-5 and SS-8 exceeded the NMOCD remediation action level for chloride. The area around SS-5 was excavated and subsequent soil sample SS-5A indicated the chloride concentration was compliant with the NMOCD remediation action level. The area around SS-8 was excavated and subsequent excavation sidewall samples SW1, SW2, SW3, SW4, SS8A and floor sample FS1 indicated chloride concentrations were compliant with the NMOCD remediation action level. Laboratory analytical results are presented on Figure 2 and summarized in Table 1, and the complete laboratory analytical reports are included as Attachment 2.

CONCLUSIONS

The impacted soil was excavated and laboratory analytical results for the confirmation soil samples collected from the final excavation extents indicate that BTEX, TPH, and chloride

concentrations are compliant with NMOCD site-specific remediation action levels. XTO has successfully removed the impacted soil at the Site and requests no further action for this release. Upon approval of this request, XTO will backfill the excavation with caliche well pad material. An updated NMOCD Form C-141 is included with 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.

Adrian Baker
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

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

Attachments:

Figure 1	Site Location Map
Figure 2	Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-2986 and 2RP-2987)
Attachment 2	Laboratory Analytical Reports

FIGURES

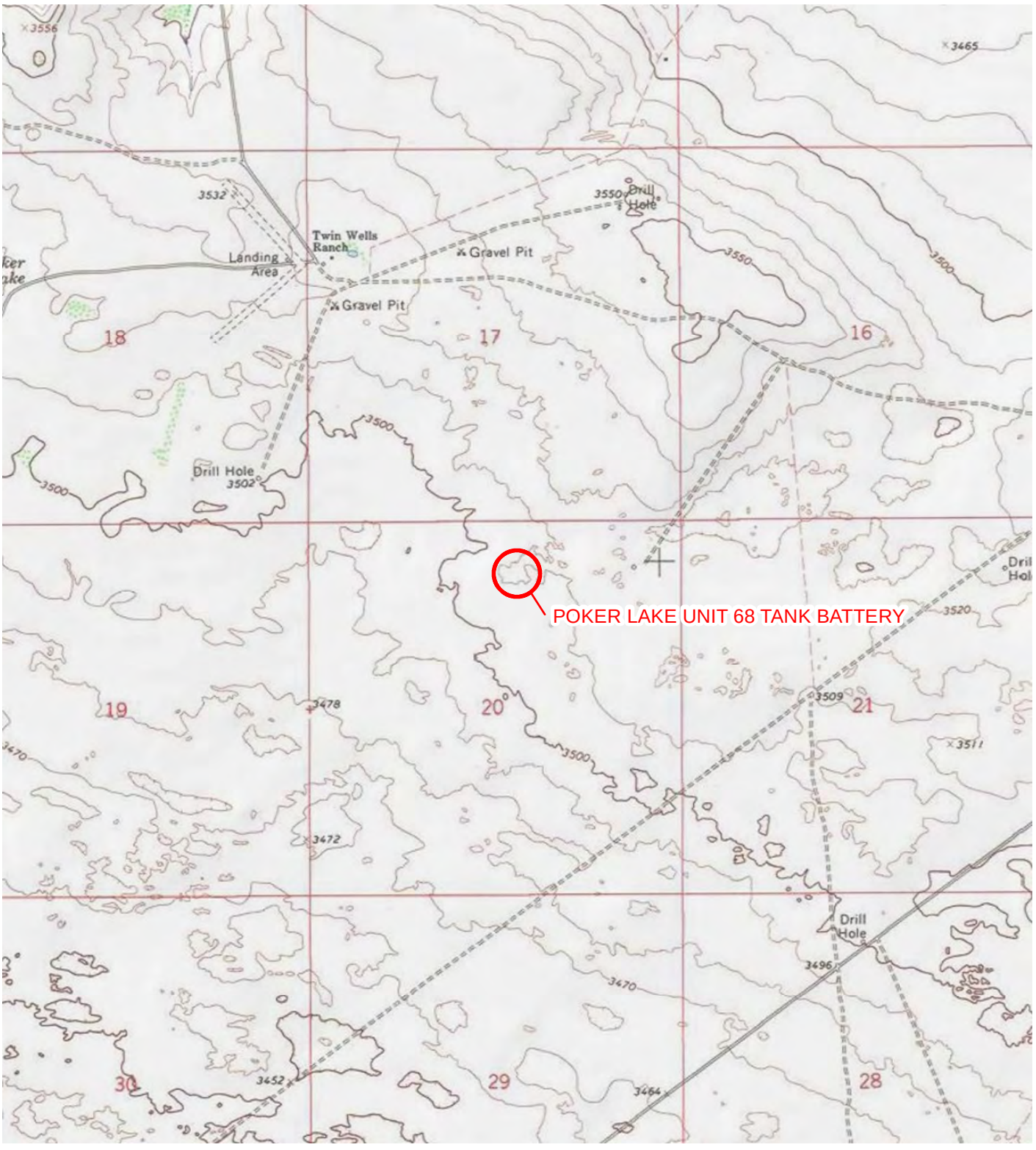


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

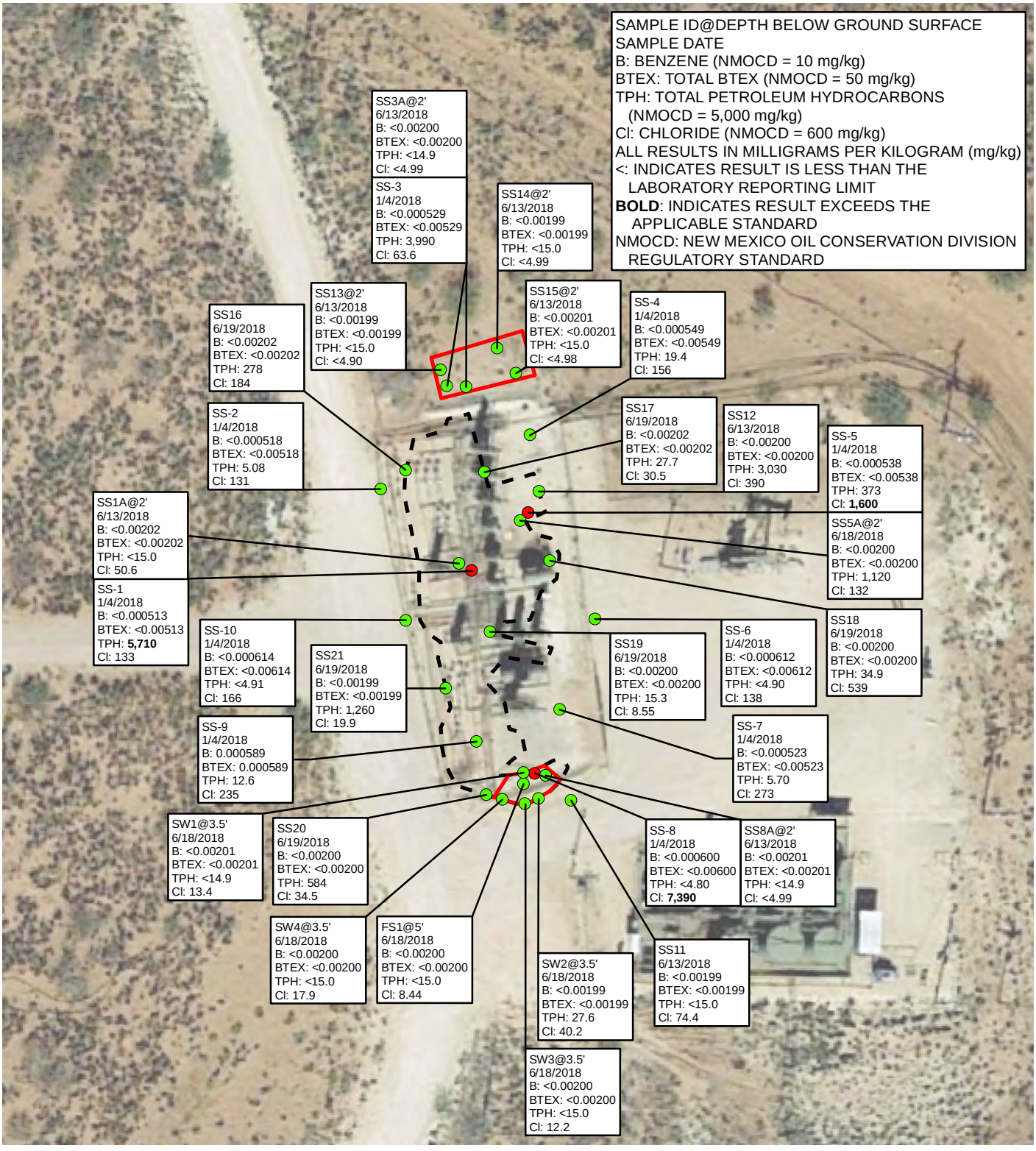
Feet

N

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2986 & 2RP-2987

FIGURE 1
SITE LOCATION MAP
POKER LAKE UNIT 68 TANK BATTERY
UNIT B SEC 20 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918002_PLU 68 TANK BATTERY\012918002_FIG01_SL_2018_2986_2987.mxd



LEGEND

- PRELIMINARY SOIL SAMPLE
- FINAL CONFIRMATION SOIL SAMPLE
- MECHANICAL EXCAVATION EXTENT
- HYDRO EXCAVATION EXTENT

IMAGE COURTESY OF GOOGLE EARTH 2017

0 60 120
Feet

N

NOTE: REMEDIATION PERMIT NUMBERS 2RP-2986 & 2RP-2987

FIGURE 2
SOIL SAMPLE LOCATIONS
POKER LAKE UNIT 68 TANK BATTERY
UNIT B SEC 20 T24S R31E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012918002_PLU 68 TANK BATTERY\012918002_FIG02_SITE_2018_2986_2987.mxd

TABLE

TABLE 1
SOIL ANALYTICAL RESULTS
PLU-68 TANK BATTERY
REMEDIATION PERMIT NUMBERS 2RP-2986 and 2RP-2987
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 Motor Oil Range Organics (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS-1	0.5	1/4/2018	<0.000513	<0.00513	<0.000513	<0.0154	<0.00513	0.176	4,050	1,660	**5,710**	133
SS-2	0.5	1/4/2018	<0.000518 J4	<0.00518	<0.000518	<0.00155	<0.00518	<0.104	<4.14	5.08	5.08	131
SS-3	0.5	1/4/2018	<0.000529 J4	<0.00529	<0.000529	<0.00159	<0.00529	<0.106	2,720	1,270	3,990	63.6
SS-4	0.5	1/4/2018	<0.000549 J4	<0.00549	<0.000549	<0.00165	<0.00549	<0.110	8.67	10.7	19.4	156
SS-5	0.5	1/4/2018	<0.000538 J4	<0.00538 J3, J6	<0.000538 J3, J6	<0.00161 J3, J6	<0.00538	<0.108 J3, J6	214	159	373	**1,600**
SS-6	0.5	1/4/2018	<0.000612 J4	<0.00612	<0.000612	<0.00184	<0.00612	<0.122	<4.90	<4.90	<4.90	138
SS-7	0.5	1/4/2018	<0.000523	<0.00523	<0.000523	<0.00157	<0.00523	<0.105	<4.18	5.70	5.70	273
SS-8	0.5	1/4/2018	<0.000600 J4	<0.00600	<0.000600	<0.00180	<0.00600	<0.120	<4.80	<4.80	<4.80	**7,390**
SS-9	0.5	1/4/2018	0.000589	<0.00513	<0.000513	<0.00154	0.000589	<0.103	5.25	7.37	12.6	235
SS-10	0.5	1/4/2018	<0.000614 J4	<0.00614	<0.000614	<0.00184	<0.00614	<0.123	<4.91	<4.91	<4.91	166
SS11	0.5	6/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	74.4
SS12	0.5	6/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<74.9	2,750	276	3,030	390
SS13	2	6/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.90
SS14	2	6/13/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<4.99
SS3A	2	6/13/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<4.99
SS8A	2	6/13/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<4.99
SS1A	2	6/13/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	50.6
SS15	2	6/13/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<4.98
SS5A	2	6/18/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	1,030	88.5	1,120	132
FS1	5	6/18/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	8.44
SW1	3.5	6/18/2018	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	13.4
SW2	3.5	6/18/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	27.6	<15.0	27.6	40.2
SW3	3.5	6/18/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	12.2
SW4	3.5	6/18/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	17.9
SS16	0.5	6/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<14.9	232	46.2	278	184
SS17	0.5	6/19/2018	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	27.7	<15.0	27.7	30.5
SS18	0.5	6/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	34.9	<15.0	34.9	539
SS19	0.5	6/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	15.3	<15.0	<15.0	15.3	8.55
SS20	0.5	6/19/2018	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	504	80.4	584	34.5
SS21	0.5	6/19/2018	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	1,180	76.4	1,260	19.9
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
J3 - The associated batch QC was outside the established quality control range for precision.
J4 - The associated batch QC was outside the established quality control range for accuracy.
J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-2986 and 2RP-2987)

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
MAY 01 2015
RECEIVED

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

Release Notification and Corrective Action

nAB1512540539 210737

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P.	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-68 Tank Battery	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-25781

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	20	24S	31E	760	North	2080	East	Eddy

Latitude N 32. 208027° Longitude W 103.798545°

NATURE OF RELEASE

Type of Release: Produced water	Volume of Release: 269 bbls	Volume Recovered: 200 bbls
Source of Release: 4" poly line	Date and Hour of Occurrence: 4/26/15 At approximately 10:00 p.m.	Date and Hour of Discovery: 4/27/15 at approximately 10:12 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD, Heather Patterson	
By Whom? Tony Savoie	Date and Hour: 4/27/15 at 10:25 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.*
An un-authorized person cut, removed seals and opened a normally closed valve connected to an open ended 4" poly line. This line had been used to supply water to PW frac operations in the area. The SCADA trend recorder showed the PW pump was operating with normal on-off cycles until shortly before 10 p.m. There were no BOPCO employees working in the area at this time. The line was removed and the connections were plugged.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted nearly the entire area of the earthen containment around the process area. Approximately 11,000 sq.ft.
All of the free standing fluid was recovered with a vacuum truck. The release is still under investigation by BOPCO, the area was left as is pending the on-going investigation. This is in the same area as a recent spill dated 4/19/15.
The impacted soil will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by Environmental Specialist:
Title: Waste Management and Remediation Specialist	Approval Date: 5/5/15 Expiration Date: N/A
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 6/5/15 Attached ☐
Date: 5/1/15 Phone: 432-556-8730	

* Attach Additional Sheets If Necessary

2RP-2986

FIELD SPILL REPORT

Distribution List: CJ Barry, TA Savoie, B. Biehl, JR Smitherman, SF Johnson, W Hanna
G Fletcher, J Fuqua, C Giese, J Brooks, M Titsworth, A Ruth, A Thompson, B Blevins, K Bright

DATE: April 26, 2015

LOCATION OF SPILL SITE: PLU 68 Battery (API 30-015-25781)

UL B-20-24S-31E, 760 FNL & 2080 FEL, Eddy Co.

GPS COORDINATES (Lat & Long): 32.207816 -103.798347

ESTIMATED VOLUMES (Oil & Water Separately):

*If BBLs Recovered are not available at time of Initial Report: Send in Follow-up report when numbers are known

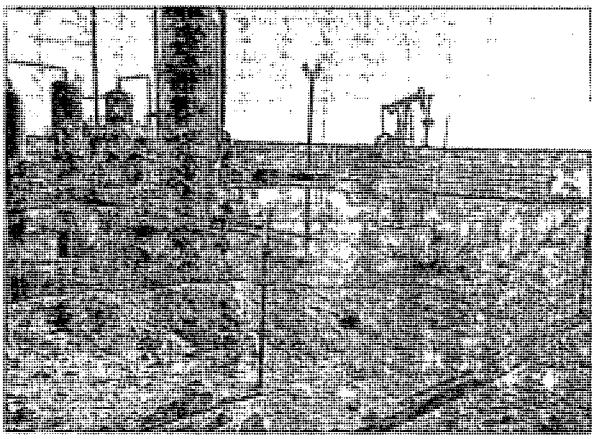
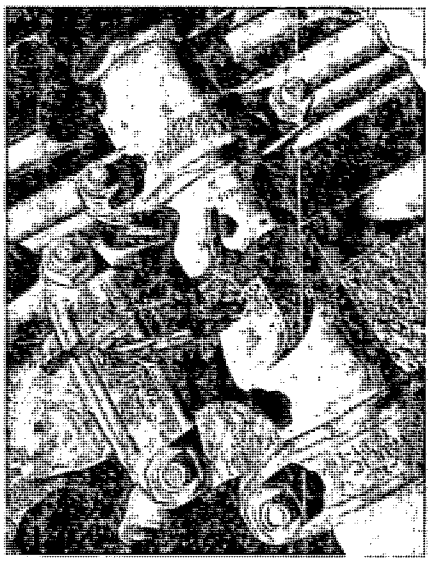
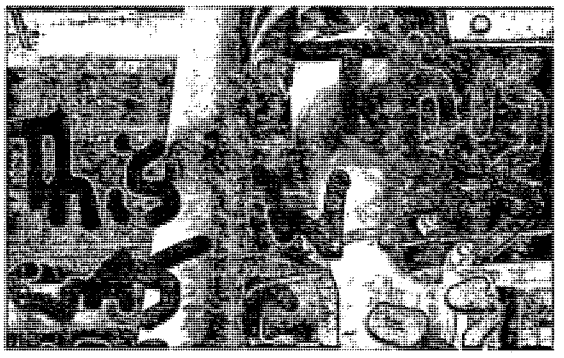
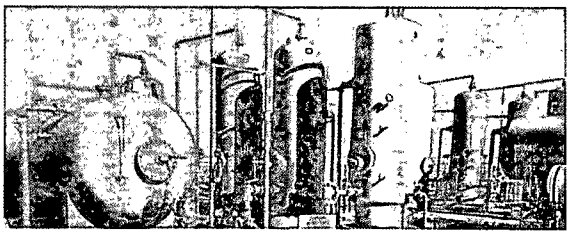
Volume spilled:		BBls Spilled	*BBls Recovered	Net Spilled		BBls Spilled	*BBls Recovered	Net Spilled
On ground /or earth berm -	Oil:			0	Water:	269	200	69
Contained in impervious liner -	Oil:			0	Water:			0
Total:	Oil:	0	0	0	Water:	269	200	69

DESCRIPTION (What happened?):
Pumper reported discharge valve on SWD pump that was installed for produce water frac operations had dart removed and seal cut. The valve was in the closed position and opened and the normally open discharge valve on SWD transfer line was closed.

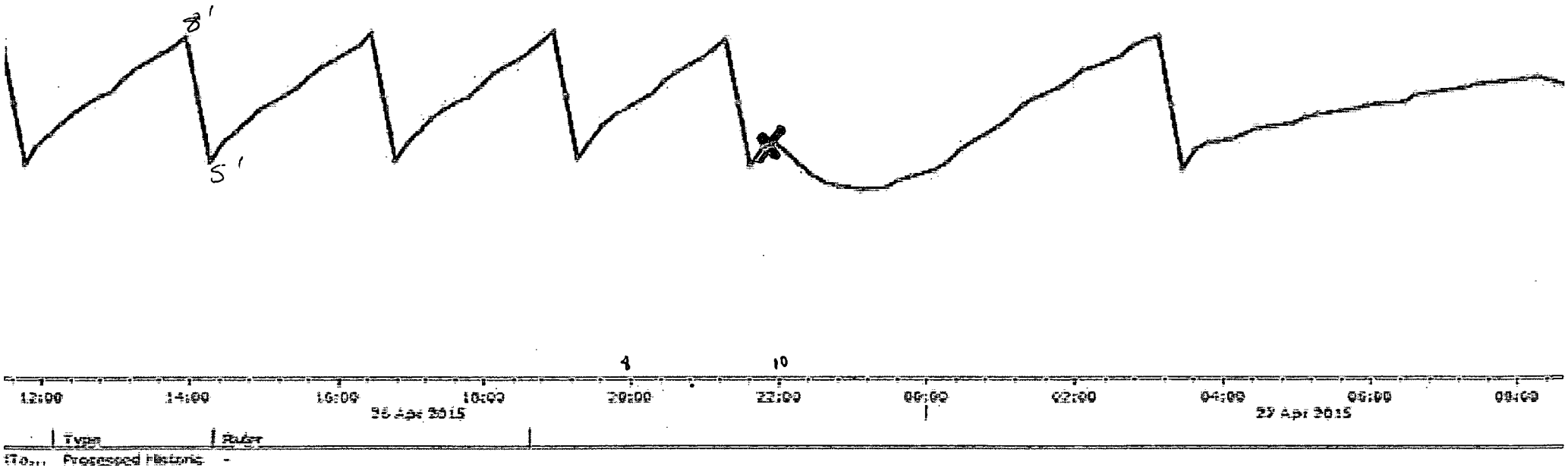
The opened valve was connected to a temporary poly line that was used for frac operation that was not in use and not connected to anything (open-ended). PW flowed out the open end and inside the earthen berm surrounding the facility equipment. The contents of the line was recovered.

SPILL RESPONSE (How was the spill cleaned up?):
Vac truck on-site recovering fluid. Remediation to be done.

PICTURE ATTACHMENT:

Bopco.PL 68.InletTank1.Accutech.Level



Bopco.PL 68.InletTank1.Accutech.Level


2015
PLU-68
© 2015 Google
Imagery Date: 2/13/2014 lat 32.207900° lon -103.798140° elev 3521 ft

ENVIRONMENTAL RELEASE NOTIFICATION
Call-In Sheet

Date: 4/27/15 10:26 am

Doug Sawyer (Person Reporting) from BSbCo (Company)

is reporting a release at the PLU 68 battery (Site).

API# _____, Sec. ____ T_____ - R _____.

Occurred on: _____ (Date of Occurrence) at _____ AM/PM. (Time of Occurrence)

Volume released: greater than 25-50 bbl C-141 received: 5/1/15

Volume recovered: unkn 2RP- 2986 & 2987 (PLU

Briefly Describe Cause of Problem and action taken: Valves either internally opened - or misaligned. Filled earthen berm

(Initials)

****

FLARE NOTIFICATION
Call-In Sheet

Date: _____

Report Flare for _____ (Reporting Company) from _____ (Person Reporting),

Occurred on: _____ (Date) at _____ AM/PM. (Time of Occurrence) C-129/C-141 received: _____

Flared Inlet Gas for: _____

Total MCF: _____

Briefly Describe Cause of Problem and action taken: _____

_____

_____

_____ (_____)
(Initials)

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
MAY 01 2015
RECEIVED

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

nAB1512554868

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: BOPCO, L.P. 260737	Contact: Tony Savoie
Address: 522 W. Mermod, Suite 704 Carlsbad, N.M. 88220	Telephone No. 575-887-7329
Facility Name: PLU-392H at the PLU-68 Tank Battery. API will be used for the Tank Battery Location	Facility Type: Exploration and Production

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-25781

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	20	24S	31E	760	North	2080	East	Eddy

Latitude N 32. 208027° **Longitude** W 103.798545°

NATURE OF RELEASE

Type of Release: Crude Oil and Produced water	Volume of Release: 8 bbls crude oil and 46 bbls. PW	Volume Recovered: 2 bbls. Crude oil and 8 bbls PW.
Source of Release: 2 7/8" flow line	Date and Hour of Occurrence: 4/19/15 time unknown.	Date and Hour of Discovery: 4/19/15 at approximately 10:00 a.m.
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? NMOCD, contact name unknown.	
By Whom? Amy Ruth	Date and Hour: 4/20/15 at 10:10 a.m.	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
A 2/78" flow developed a leak due external corrosion. A temporary repair clamp was placed on the line at the time of discovery. A section of pipe was replaced on 4/20/15.

Describe Area Affected and Cleanup Action Taken.*
The spill impacted approximately 4,165 sq.ft. of caliche/gravel area inside the earthen containment and fenced location around the process equipment. All of the free standing fluid was recovered with a vacuum truck. The stained area was left as is pending the final remediation.
The impacted soil will be cleaned up in accordance to the NMOCD and BLM remediation guidelines.

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

Signature: Tony Savoie	OIL CONSERVATION DIVISION
Printed Name: Tony Savoie	Approved by Environmental Specialist:
Title: Waste Management and Remediation Specialist	Approval Date: 5/5/15 Expiration Date: NA
E-mail Address: tasavoie@basspet.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 6/5/15 Attached ☐
Date: 5/1/15 Phone: 432-556-8730	

* Attach Additional Sheets If Necessary

2RP-2987

FIELD SPILL REPORT

Distribution List: CJ Barry, TA Savoie, B. Biehl, JR Smitherman, SF Johnson, W Hanna
G Fletcher, J Fuqua, C Giese, J Brooks, M Titsworth, A Ruth, A Thompson, B Blevins, K Bright

DATE: April 19, 2015

LOCATION OF SPILL SITE: PLU 392H flowline at PLU68 Btry (API 30-015-25781)

UL B-20-24S-31E 760 FNL & 2080 FEL, Eddy Co.

GPS COORDINATES (Lat & Long): 32.208027 -103.798545

ESTIMATED VOLUMES (Oil & Water Separately):

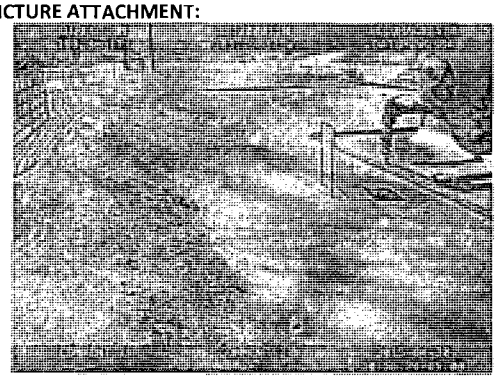
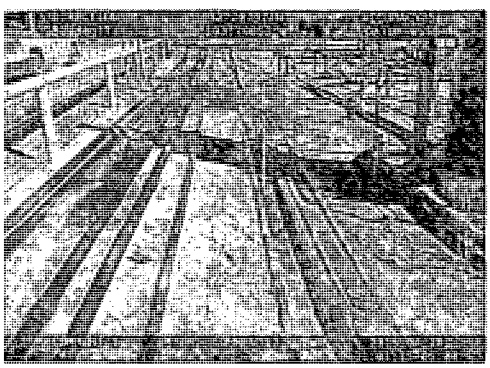
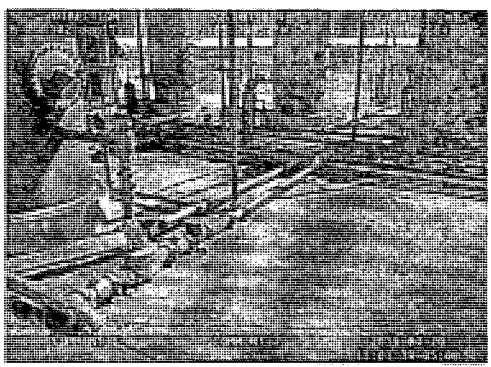
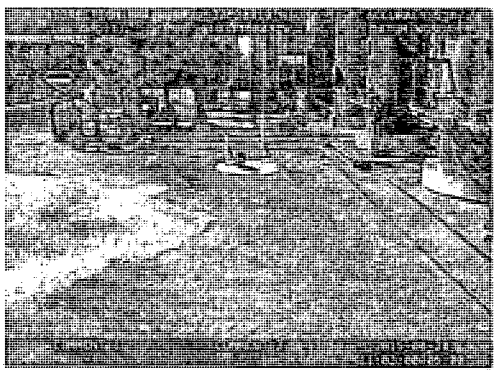
*If BBLs Recovered are not available at time of Initial Report: Send in Follow-up report when numbers are known

Volume spilled:		BBls Spilled	*BBls Recovered	Net Spilled		BBls Spilled	*BBls Recovered	Net Spilled
On ground /or earth berm -	Oil:	8	2	**6**	Water:	46	8	**38**
Contained in impervious liner -	Oil:			**0**	Water:			**0**
Total:	Oil:	**8**	**2**	**6**	Water:	**46**	**8**	**38**

DESCRIPTION (What happened?):
EHS was notified of a release of fluids from a corroded flowline within the confines of the PLU 68 Battery's process equipment earthen containment. The leak was discovered sometime around 10a.m. 4/19. All fluids remained within the berm.

SPILL RESPONSE (How was the spill cleaned up?):
Line was clamped on 4/19 and the crew replaced the line section on 4/20. Notification to NMOCD was made by email at 10:00 am today and BLM was notified by phone. An initial form C-141 will be submitted. Total recovered 10bbls. (Estimated 2 bbl oil and 8 bbl produced water) Remediation to be planned

PICTURE ATTACHMENT:


PLU-392H
PLU-68
© 2015 Google
Goog


PLU-68
© 2015 Google
Imagery Date: 2/13/2014 lat 32.207900° lon -103.798140° elev 3521 ft

BOPCO, L.P.

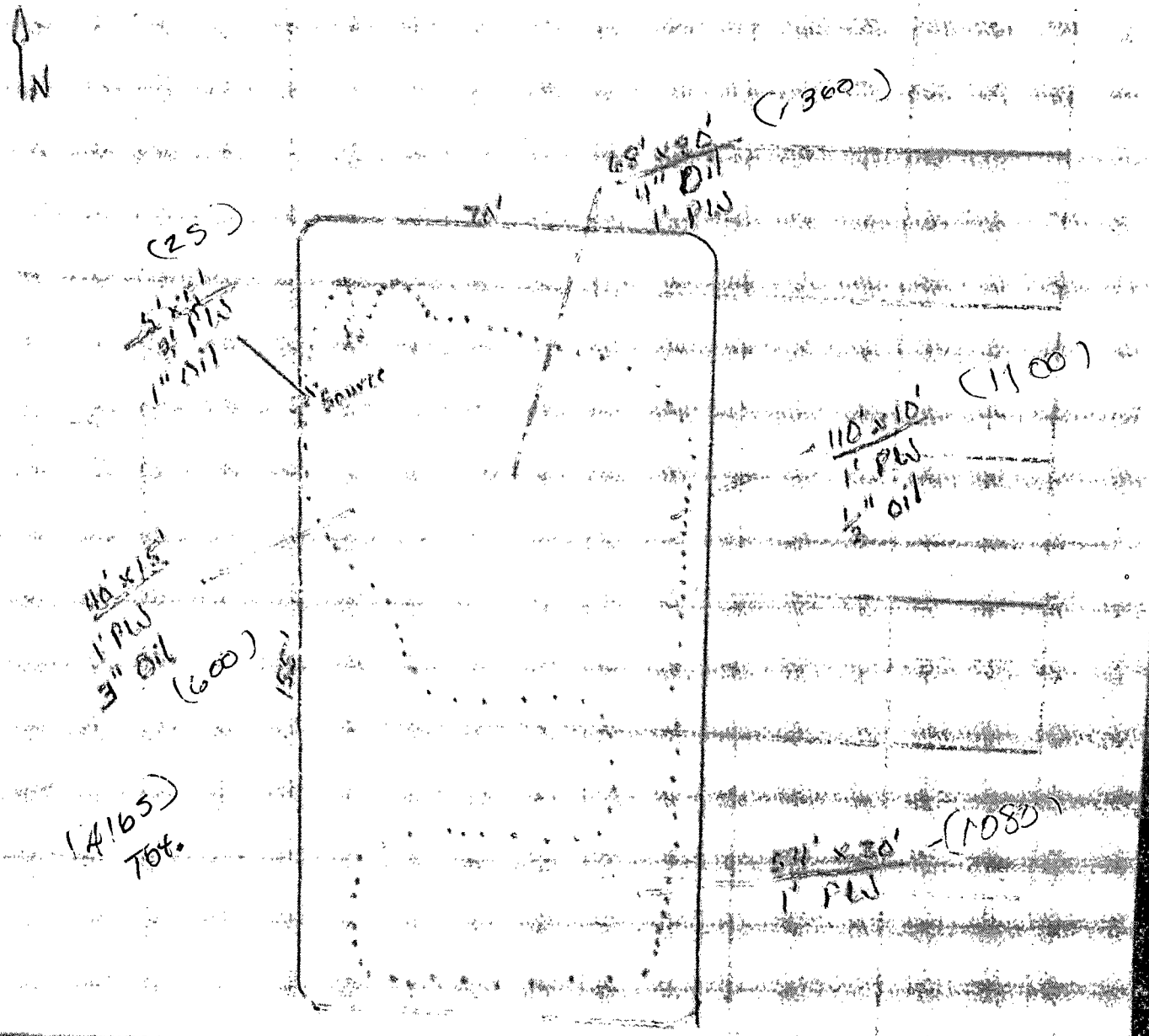
PAGE NO. 1

DATE	DEPARTMENT	PREPARED BY
4.20.15	EHS	A. Ruth

PLU 39?H Flowline leak

Corrosion of flowline within confines of process equipment earthen berm at PLU 68 battery. Leak occurred (discovered) 4.19.15 at about 10 a.m. Notified NMOCD at 10:10 this morning. ~10 bbls total fluid lost; recovered yesterday. Line clamped yesterday. Crew replaced joint this morning. GPS source: N 32.2058027°, -103.798545° W

In soil: Oil: 6 bbls
PW: 58 bbls



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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-2986
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.208027 Longitude -103.798545

(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU-68 Tank Battery	Site Type Tank Battery
Date Release 4/26/15	API# 30-015-25781

Unit Letter	Section	Township	Range	County
B	20	24S	31E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name: State*)

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 269	Volume Recovered (bbls) 200
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
An un-authorized person cut, removed seals and opened a normally closed valve connected to an open ended 4" poly line. This line had been used to supply water to PW frac operations in the area. The SCADA trend recorder showed the PW pump was operating with normal on-off cycles until shortly before 10 pm. There were no Bopco employees working in the area at this time. The line was removed and the connections were plugged.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2986
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume, excluding gases, of 25 barrels or more.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Tony Savoie to Heather Patterson (NMOCD), 4/27/15, 10:25 AM	

Initial Response

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

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

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/22/2018

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2986
Facility ID	
Application ID	

Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/22/2018

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	2RP-2987
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.208027 Longitude -103.798545

(NAD 83 in decimal degrees to 5 decimal places)

Site Name PLU 392H at the PLU-68 Tank Battery	Site Type Tank Battery
Date Release 4/26/15	API# 30-015-25781

Unit Letter	Section	Township	Range	County
B	20	24S	31E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name: State*)

Nature and Volume of Release

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

☒ Crude Oil	Volume Released (bbls) 8	Volume Recovered (bbls) 2
☒ Produced Water	Volume Released (bbls) 46	Volume Recovered (bbls) 8
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
A 2 7/8" flow developed a leak due to external corrosion. A temporary repair clamp was placed on the line at the time of the discovery. A section of pipe was replaced on 4/20/2015/

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2987
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? An unauthorized release of a volume, excluding gases, of 25 barrels or more.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Yes, by Amy Ruth to unknown (NMOCD), 4/19/15, 10:00 AM	

Initial Response

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

☒ The source of the release has been stopped.

☒ The impacted area has been secured to protect human health and the environment.

☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

☒ All free liquids and recoverable materials have been removed and managed appropriately.

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

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

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/22/2018

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

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-2987
Facility ID	
Application ID	

Closure

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

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

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

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

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature: Date: 10/22/2018

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

OCD Only

Received by: Date:

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

Closure Approved by: Date:

Printed Name: Title:

ATTACHMENT 2: LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

January 12, 2018

XTO Energy- Delaware Division

Sample Delivery Group:	L961528
Samples Received:	01/06/2018
Project Number:	30-015-25781
Description:	Confrimation Soil Sampling
Site:	PLU-68 TANK BATTERY
Report To:	Kyle Littrell
	6401 N Holiday Hill Rd
	Suite 200
	Midland, TX 79707

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

TABLE OF CONTENTS

SS1 L961528-01 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:03 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060779	1	01/09/18 12:42	01/09/18 12:53	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 22:28	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 12:33	LRL
Volatile Organic Compounds (GC) by Method 8021	WG1061990	1	01/06/18 18:43	01/11/18 16:07	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	50	01/08/18 19:43	01/11/18 08:01	ACM

SS2 L961528-02 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:06 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060776	1	01/09/18 12:55	01/09/18 13:07	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 22:36	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 12:57	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 23:02	ACM

SS3 L961528-03 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:09 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1059974	1	01/09/18 14:06	01/09/18 14:22	JD
Wet Chemistry by Method 300.0	WG1061358	1	01/10/18 15:44	01/10/18 17:38	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 13:22	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	20	01/08/18 19:43	01/11/18 07:47	ACM

SS4 L961528-04 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:13 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1059974	1	01/09/18 14:06	01/09/18 14:22	JD
Wet Chemistry by Method 300.0	WG1061358	1	01/10/18 15:44	01/10/18 17:45	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 13:46	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 23:15	ACM

SS5 L961528-05 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:16 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060779	1	01/09/18 12:42	01/09/18 12:53	KDW
Wet Chemistry by Method 300.0	WG1060409	5	01/08/18 16:26	01/08/18 22:45	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 14:10	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	5	01/08/18 19:43	01/11/18 01:05	ACM

SS6 L961528-06 Solid

Collected by: Aaron Williamson | Collected date/time: 01/04/18 08:18 | Received date/time: 01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1059974	1	01/09/18 14:06	01/09/18 14:22	JD
Wet Chemistry by Method 300.0	WG1061358	1	01/10/18 15:44	01/10/18 17:54	DR
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 14:34	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 23:29	ACM

SS7 L961528-07 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 08:21	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060773	1	01/09/18 13:10	01/09/18 13:17	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 22:53	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 14:58	LRL
Volatile Organic Compounds (GC) by Method 8021	WG1061990	1	01/06/18 18:43	01/11/18 16:28	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 23:43	ACM

SS8 L961528-08 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 08:24	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060773	1	01/09/18 13:10	01/09/18 13:17	KDW
Wet Chemistry by Method 300.0	WG1060409	20	01/08/18 16:26	01/08/18 23:02	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 15:37	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/11/18 00:12	ACM

SS9 L961528-09 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 08:27	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060773	1	01/09/18 13:10	01/09/18 13:17	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 23:10	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 16:00	LRL
Volatile Organic Compounds (GC) by Method 8021	WG1061990	1	01/06/18 18:43	01/11/18 16:49	BMB
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/10/18 22:22	ACM

SS10 L961528-10 Solid

Collected by	Collected date/time	Received date/time
Aaron Williamson	01/04/18 08:30	01/06/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1060778	1	01/10/18 12:40	01/10/18 12:43	KDW
Wet Chemistry by Method 300.0	WG1060409	1	01/08/18 16:26	01/08/18 23:44	MAJ
Volatile Organic Compounds (GC) by Method 8015/8021	WG1060816	1	01/06/18 18:43	01/09/18 16:24	LRL
Semi-Volatile Organic Compounds (GC) by Method 8015	WG1060456	1	01/08/18 19:43	01/11/18 00:26	ACM

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.4		1	01/09/2018 12:53	WG1060779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	133		10.3	1	01/08/2018 22:28	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000513	1	01/11/2018 16:07	WG1061990
Toluene	ND		0.00513	1	01/09/2018 12:33	WG1060816
Ethylbenzene	ND		0.000513	1	01/09/2018 12:33	WG1060816
Total Xylene	ND		0.00154	1	01/09/2018 12:33	WG1060816
TPH (GC/FID) Low Fraction	0.176		0.103	1	01/09/2018 12:33	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*85.0*		*77.0-120*		*01/11/2018 16:07*	WG1061990
(S) a,a,a-Trifluorotoluene(FID)	*84.9*		*77.0-120*		*01/09/2018 12:33*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*89.5*		*75.0-128*		*01/09/2018 12:33*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*87.9*		*75.0-128*		*01/11/2018 16:07*	WG1061990

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	4050		205	50	01/11/2018 08:01	WG1060456
C28-C40 Oil Range	1660		205	50	01/11/2018 08:01	WG1060456
(S) o-Terphenyl	*0.000*	J7	*18.0-148*		*01/11/2018 08:01*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.6		1	01/09/2018 13:07	WG1060776

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	131		10.4	1	01/08/2018 22:36	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000518	1	01/09/2018 12:57	WG1060816
Toluene	ND		0.00518	1	01/09/2018 12:57	WG1060816
Ethylbenzene	ND		0.000518	1	01/09/2018 12:57	WG1060816
Total Xylene	ND		0.00155	1	01/09/2018 12:57	WG1060816
TPH (GC/FID) Low Fraction	ND		0.104	1	01/09/2018 12:57	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 12:57*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*117*		*75.0-128*		*01/09/2018 12:57*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.14	1	01/10/2018 23:02	WG1060456
C28-C40 Oil Range	5.08		4.14	1	01/10/2018 23:02	WG1060456
(S) o-Terphenyl	*65.4*		*18.0-148*		*01/10/2018 23:02*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	01/09/2018 14:22	WG1059974

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	63.6		10.6	1	01/10/2018 17:38	WG1061358

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000529	1	01/09/2018 13:22	WG1060816
Toluene	ND		0.00529	1	01/09/2018 13:22	WG1060816
Ethylbenzene	ND		0.000529	1	01/09/2018 13:22	WG1060816
Total Xylene	ND		0.00159	1	01/09/2018 13:22	WG1060816
TPH (GC/FID) Low Fraction	ND		0.106	1	01/09/2018 13:22	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*89.0*		*77.0-120*		*01/09/2018 13:22*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*91.4*		*75.0-128*		*01/09/2018 13:22*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	2720		84.6	20	01/11/2018 07:47	WG1060456
C28-C40 Oil Range	1270		84.6	20	01/11/2018 07:47	WG1060456
(S) o-Terphenyl	*218*	J7	*18.0-148*		*01/11/2018 07:47*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.2		1	01/09/2018 14:22	WG1059974

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	156		11.0	1	01/10/2018 17:45	WG1061358

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000549	1	01/09/2018 13:46	WG1060816
Toluene	ND		0.00549	1	01/09/2018 13:46	WG1060816
Ethylbenzene	ND		0.000549	1	01/09/2018 13:46	WG1060816
Total Xylene	ND		0.00165	1	01/09/2018 13:46	WG1060816
TPH (GC/FID) Low Fraction	ND		0.110	1	01/09/2018 13:46	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*110*		*77.0-120*		*01/09/2018 13:46*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*115*		*75.0-128*		*01/09/2018 13:46*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	8.67		4.39	1	01/10/2018 23:15	WG1060456
C28-C40 Oil Range	10.7		4.39	1	01/10/2018 23:15	WG1060456
(S) o-Terphenyl	*66.9*		*18.0-148*		*01/10/2018 23:15*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.0		1	01/09/2018 12:53	WG1060779

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	1600		53.8	5	01/08/2018 22:45	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000538	1	01/09/2018 14:10	WG1060816
Toluene	ND	J3 J6	0.00538	1	01/09/2018 14:10	WG1060816
Ethylbenzene	ND	J3 J6	0.000538	1	01/09/2018 14:10	WG1060816
Total Xylene	ND	J3 J6	0.00161	1	01/09/2018 14:10	WG1060816
TPH (GC/FID) Low Fraction	ND	J3 J6	0.108	1	01/09/2018 14:10	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*105*		*77.0-120*		*01/09/2018 14:10*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*109*		*75.0-128*		*01/09/2018 14:10*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	214		21.5	5	01/11/2018 01:05	WG1060456
C28-C40 Oil Range	159		21.5	5	01/11/2018 01:05	WG1060456
(S) o-Terphenyl	*48.4*		*18.0-148*		*01/11/2018 01:05*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	01/09/2018 14:22	WG1059974

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	138		12.2	1	01/10/2018 17:54	WG1061358

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000612	1	01/09/2018 14:34	WG1060816
Toluene	ND		0.00612	1	01/09/2018 14:34	WG1060816
Ethylbenzene	ND		0.000612	1	01/09/2018 14:34	WG1060816
Total Xylene	ND		0.00184	1	01/09/2018 14:34	WG1060816
TPH (GC/FID) Low Fraction	ND		0.122	1	01/09/2018 14:34	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 14:34*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*116*		*75.0-128*		*01/09/2018 14:34*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.90	1	01/10/2018 23:29	WG1060456
C28-C40 Oil Range	ND		4.90	1	01/10/2018 23:29	WG1060456
(S) o-Terphenyl	*64.8*		*18.0-148*		*01/10/2018 23:29*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	95.7		1	01/09/2018 13:17	WG1060773

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	273		10.5	1	01/08/2018 22:53	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.000523	1	01/11/2018 16:28	WG1061990
Toluene	ND		0.00523	1	01/09/2018 14:58	WG1060816
Ethylbenzene	ND		0.000523	1	01/09/2018 14:58	WG1060816
Total Xylene	ND		0.00157	1	01/09/2018 14:58	WG1060816
TPH (GC/FID) Low Fraction	ND		0.105	1	01/09/2018 14:58	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*91.4*		*77.0-120*		*01/11/2018 16:28*	WG1061990
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 14:58*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*94.3*		*75.0-128*		*01/11/2018 16:28*	WG1061990
(S) a,a,a-Trifluorotoluene(PID)	*115*		*75.0-128*		*01/09/2018 14:58*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.18	1	01/10/2018 23:43	WG1060456
C28-C40 Oil Range	5.70		4.18	1	01/10/2018 23:43	WG1060456
(S) o-Terphenyl	*70.8*		*18.0-148*		*01/10/2018 23:43*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.4		1	01/09/2018 13:17	WG1060773

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	7390		240	20	01/08/2018 23:02	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000600	1	01/09/2018 15:37	WG1060816
Toluene	ND		0.00600	1	01/09/2018 15:37	WG1060816
Ethylbenzene	ND		0.000600	1	01/09/2018 15:37	WG1060816
Total Xylene	ND		0.00180	1	01/09/2018 15:37	WG1060816
TPH (GC/FID) Low Fraction	ND		0.120	1	01/09/2018 15:37	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 15:37*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*116*		*75.0-128*		*01/09/2018 15:37*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.80	1	01/11/2018 00:12	WG1060456
C28-C40 Oil Range	ND		4.80	1	01/11/2018 00:12	WG1060456
(S) o-Terphenyl	*61.2*		*18.0-148*		*01/11/2018 00:12*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.5		1	01/09/2018 13:17	WG1060773

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	235		10.3	1	01/08/2018 23:10	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.000589		0.000513	1	01/11/2018 16:49	WG1061990
Toluene	ND		0.00513	1	01/09/2018 16:00	WG1060816
Ethylbenzene	ND		0.000513	1	01/09/2018 16:00	WG1060816
Total Xylene	ND		0.00154	1	01/09/2018 16:00	WG1060816
TPH (GC/FID) Low Fraction	ND		0.103	1	01/09/2018 16:00	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*91.0*		*77.0-120*		*01/11/2018 16:49*	WG1061990
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 16:00*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*93.8*		*75.0-128*		*01/11/2018 16:49*	WG1061990
(S) a,a,a-Trifluorotoluene(PID)	*117*		*75.0-128*		*01/09/2018 16:00*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	5.25		4.10	1	01/10/2018 22:22	WG1060456
C28-C40 Oil Range	7.37		4.10	1	01/10/2018 22:22	WG1060456
(S) o-Terphenyl	*66.4*		*18.0-148*		*01/10/2018 22:22*	WG1060456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	01/10/2018 12:43	WG1060778

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Chloride	166		12.3	1	01/08/2018 23:44	WG1060409

Volatile Organic Compounds (GC) by Method 8015/8021

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND	J4	0.000614	1	01/09/2018 16:24	WG1060816
Toluene	ND		0.00614	1	01/09/2018 16:24	WG1060816
Ethylbenzene	ND		0.000614	1	01/09/2018 16:24	WG1060816
Total Xylene	ND		0.00184	1	01/09/2018 16:24	WG1060816
TPH (GC/FID) Low Fraction	ND		0.123	1	01/09/2018 16:24	WG1060816
(S) a,a,a-Trifluorotoluene(FID)	*111*		*77.0-120*		*01/09/2018 16:24*	WG1060816
(S) a,a,a-Trifluorotoluene(PID)	*117*		*75.0-128*		*01/09/2018 16:24*	WG1060816

Semi-Volatile Organic Compounds (GC) by Method 8015

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
C10-C28 Diesel Range	ND		4.91	1	01/11/2018 00:26	WG1060456
C28-C40 Oil Range	ND		4.91	1	01/11/2018 00:26	WG1060456
(S) o-Terphenyl	*67.6*		*18.0-148*		*01/11/2018 00:26*	WG1060456

Method Blank (MB)

(MB) R3278464-1 01/09/18 14:22

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L961178-02 Original Sample (OS) • Duplicate (DUP)

(OS) L961178-02 01/09/18 14:22 • (DUP) R3278464-3 01/09/18 14:22

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	83.7	85.2	1	2		5

Laboratory Control Sample (LCS)

(LCS) R3278464-2 01/09/18 14:22

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3278455-1 01/09/18 13:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.002			

L961517-04 Original Sample (OS) • Duplicate (DUP)

(OS) L961517-04 01/09/18 13:17 • (DUP) R3278455-3 01/09/18 13:17

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	94.3	94.3	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278455-2 01/09/18 13:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3278452-1 01/09/18 13:07

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.002			

L961517-14 Original Sample (OS) • Duplicate (DUP)

(OS) L961517-14 01/09/18 13:07 • (DUP) R3278452-3 01/09/18 13:07

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.7	89.3	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278452-2 01/09/18 13:07

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3278697-1 01/10/18 12:43

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.001			

L961506-01 Original Sample (OS) • Duplicate (DUP)

(OS) L961506-01 01/10/18 12:43 • (DUP) R3278697-3 01/10/18 12:43

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	77.4	80.0	1	3		5

Laboratory Control Sample (LCS)

(LCS) R3278697-2 01/10/18 12:43

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3278447-1 01/09/18 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.002			

L961532-03 Original Sample (OS) • Duplicate (DUP)

(OS) L961532-03 01/09/18 12:53 • (DUP) R3278447-3 01/09/18 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	92.1	92.1	1	0		5

Laboratory Control Sample (LCS)

(LCS) R3278447-2 01/09/18 12:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85-115	

Method Blank (MB)

(MB) R3278237-1 01/08/18 17:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	3.47	J	0.795	10.0

L961528-09 Original Sample (OS) • Duplicate (DUP)

(OS) L961528-09 01/08/18 23:10 • (DUP) R3278237-4 01/08/18 23:19

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	235	225	1	4.39		20

L961532-09 Original Sample (OS) • Duplicate (DUP)

(OS) L961532-09 01/09/18 01:39 • (DUP) R3278237-7 01/09/18 01:47

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	60.4	58.5	1	3.27		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278237-2 01/08/18 18:05 • (LCSD) R3278237-3 01/08/18 18:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	199	200	99.4	100	90-110			0.657	20

L961532-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-01 01/08/18 23:53 • (MS) R3278237-5 01/09/18 00:01 • (MSD) R3278237-6 01/09/18 00:10

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	500	431	1010	986	116	111	1	80-120	E		2.62	20

Method Blank (MB)

(MB) R3278660-1 01/10/18 16:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	1.65	J	0.795	10.0

L962135-01 Original Sample (OS) • Duplicate (DUP)

(OS) L962135-01 01/10/18 18:02 • (DUP) R3278660-4 01/10/18 18:11

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	11600	10400	20	11.3		20

L962201-10 Original Sample (OS) • Duplicate (DUP)

(OS) L962201-10 01/10/18 21:10 • (DUP) R3278660-7 01/10/18 21:19

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	552	551	1	0.224		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278660-2 01/10/18 16:44 • (LCSD) R3278660-3 01/10/18 16:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloride	200	201	198	100	99.1	90-110			1.17	20

Method Blank (MB)

(MB) R3278825-5 01/09/18 11:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
Toluene	U		0.000150	0.00500
Ethylbenzene	U		0.000110	0.000500
Total Xylene	U		0.000460	0.00150
TPH (GC/FID) Low Fraction	U		0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	*113*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*119*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278825-1 01/09/18 09:34 • (LCSD) R3278825-2 01/09/18 09:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0641	0.0629	128	126	71.0-121	J4	J4	1.93	20
Toluene	0.0500	0.0578	0.0560	116	112	72.0-120			3.19	20
Ethylbenzene	0.0500	0.0561	0.0546	112	109	76.0-121			2.63	20
Total Xylene	0.150	0.158	0.154	105	103	75.0-124			2.63	20
(S) a,a,a-Trifluorotoluene(FID)				*112*	*113*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*118*	*118*	*75.0-128*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278825-3 01/09/18 10:21 • (LCSD) R3278825-4 01/09/18 10:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.19	6.08	113	111	70.0-136			1.78	20
(S) a,a,a-Trifluorotoluene(FID)				*119*	*119*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*130*	*130*	*75.0-128*	J1	J1		

L961528-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961528-05 01/09/18 14:10 • (MS) R3278825-6 01/09/18 18:51 • (MSD) R3278825-7 01/09/18 19:15

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0538	ND	0.0100	0.00779	18.6	14.5	1	10.0-146			25.0	29
Toluene	0.0538	ND	0.00490	0.00311	9.11	5.78	1	10.0-143	J6	J3 J6	44.8	30
Ethylbenzene	0.0538	ND	0.00190	0.000796	3.53	1.48	1	10.0-147	J6	J3 J6	81.8	31
Total Xylene	0.161	ND	0.00631	0.00294	3.91	1.82	1	10.0-149	J6	J3 J6	73.1	30
(S) a,a,a-Trifluorotoluene(FID)					*107*	*106*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*111*	*110*		*75.0-128*				

L961528-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961528-05 01/09/18 14:10 • (MS) R3278825-8 01/09/18 19:39 • (MSD) R3278825-9 01/09/18 20:03

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.92	ND	0.276	0.184	4.27	2.71	1	10.0-147	J6	J3 J6	40.1	30
(S) a,a,a-Trifluorotoluene(FID)					*106*	*105*		*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)					*111*	*109*		*75.0-128*				

Method Blank (MB)

(MB) R3278896-5 01/11/18 13:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000120	0.000500
(S) a,a,a-Trifluorotoluene(FID)	*93.4*			*77.0-120*
(S) a,a,a-Trifluorotoluene(PID)	*95.8*			*75.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278896-1 01/11/18 11:35 • (LCSD) R3278896-2 01/11/18 11:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0500	0.0466	0.0457	93.2	91.4	71.0-121			1.87	20
(S) a,a,a-Trifluorotoluene(FID)				*92.3*	*92.3*	*77.0-120*				
(S) a,a,a-Trifluorotoluene(PID)				*95.7*	*95.5*	*75.0-128*				

Method Blank (MB)

(MB) R3278394-1 01/09/18 19:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C40 Oil Range	U		0.274	4.00
(S) o-Terphenyl	*63.5*			*18.0-148*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3278394-2 01/09/18 19:59 • (LCSD) R3278394-3 01/09/18 20:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	60.0	41.0	35.2	68.3	58.6	50.0-150			15.2	20
(S) o-Terphenyl				*72.3*	*64.5*	*18.0-148*				

L961532-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L961532-09 01/10/18 23:57 • (MS) R3278802-1 01/10/18 22:35 • (MSD) R3278802-2 01/10/18 22:48

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	61.8	ND	43.9	45.6	67.5	70.2	1	50.0-150			3.86	20
(S) o-Terphenyl					*57.9*	*58.2*		*18.0-148*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

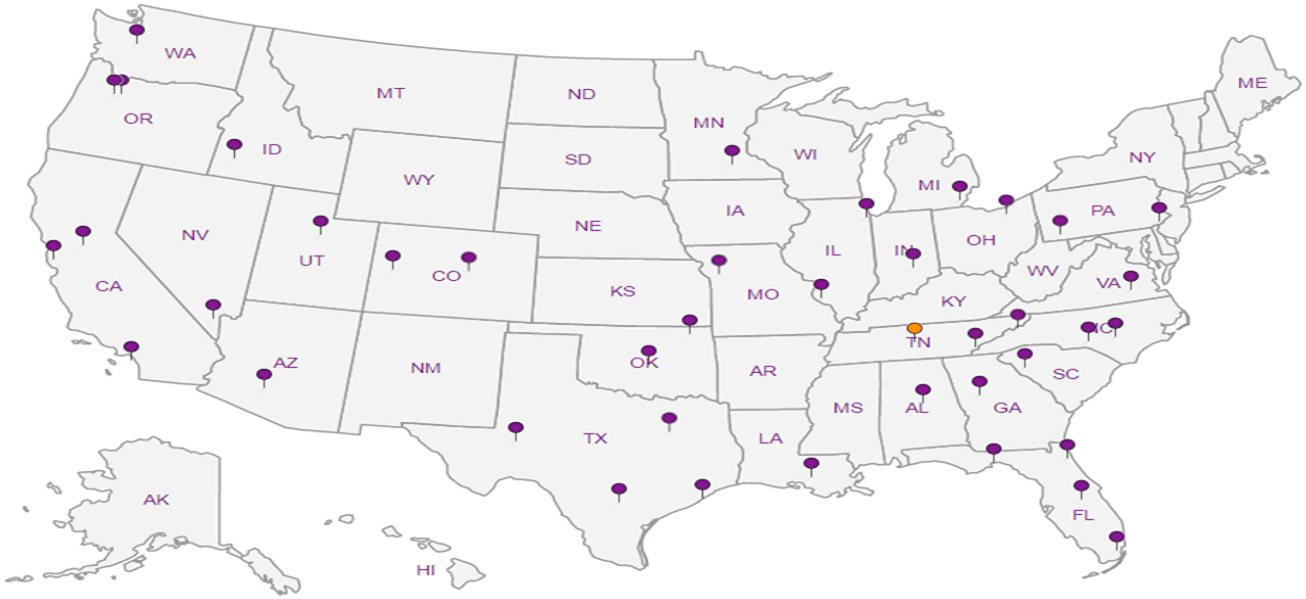
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



LTE

Billing Information: XTO

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES — YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L961528

G093

Report to: Kyle Littrell

Email To: Kyle_Littrell@Xtoenergy.com, Abaker@LTENV.com

Project Description: Confirmation 50:1 Sampling

City/State Collected: NM

Phone: Fax: 1-970-317-1867

Client Project # 30-015-25781

Lab Project #

Collected by (print): Aaron Williamson

Site/Facility ID # PLU-68 Tank Battery (2RP-2980)

P.O. # 012918002

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ✓ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Acctnum: XTOMTX

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	BTEX EPA Method 8021	TPH EPA Method 8015	Chloride EPA Method 300.1	Remarks	Sample # (lab only)
SS1	Grab	SS	6"	1-4-18	08:03	1	✓	✓	✓		-01
SS2	Grab	SS	6"	1-4-18	08:06	1	✓	✓	✓		-02
SS3	Grab	SS	6"	1-4-18	08:09	1	✓	✓	✓		-03
SS4	Grab	SS	6"	1-4-18	08:13	1	✓	✓	✓		-04
SS5	Grab	SS	6"	1-4-18	08:16	1	✓	✓	✓		-05
SS6	Grab	SS	6"	1-4-18	08:18	1	✓	✓	✓		-06
SS7	Grab	SS	6"	1-4-18	08:21	1	✓	✓	✓		-07
SS8	Grab	SS	6"	1-4-18	08:24	1	✓	✓	✓		-08
SS9	Grab	SS	6"	1-4-18	08:27	1	✓	✓	✓		-09
SS10	Grab	SS	6"	1-4-18	08:30	1	✓	✓	✓		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: ___ UPS ✓ FedEx ___ Courier ___

Tracking # 782711601610

Sample Receipt Checklist

COC Seal Present/Intact:	___NP ___Y ___N
COC Signed/Accurate:	___Y ___N
Bottles arrive intact:	___Y ___N
Correct bottles used:	___Y ___N
Sufficient volume sent:	___Y ___N
If Applicable	
VOA Zero Headspace:	___Y ___N
Preservation Correct/Checked:	___Y ___N

	Date:	Time:		
Relinquished by: (Signature)	1-5-18	10:00	Received by: (Signature) Kathleen Hunt	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature) Kathleen Hunt	1-5-18	12:30	Received by: (Signature) FedEX	Temp: 1.1 °C Bottles Received: 10
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) Maria Gallegos	Date: 01-06-18 Time: 08:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Analytical Report 589384

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 68

012918002

22-JUN-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)

22-JUN-18

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

Reference: XENCO Report No(s): **589384**
PLU 68
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) 589384. 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. 589384 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS11	S	06-13-18 13:00	6 In	589384-001
SS12	S	06-13-18 13:15	6 In	589384-002
SS13	S	06-13-18 15:00	2 In	589384-003
SS14	S	06-13-18 15:05	2 In	589384-004
SS3A	S	06-13-18 15:10	2 In	589384-005
SS8A	S	06-13-18 13:30	2 In	589384-006
SS1A	S	06-13-18 16:00	2 In	589384-007
SS15	S	06-13-18 16:15	2 In	589384-008

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 68

Project ID: *012918002*
Work Order Number(s): *589384*

Report Date: *22-JUN-18*
Date Received: *06/15/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3054072 BTEX by EPA 8021B

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

Certificate of Analysis Summary 589384

LT Environmental, Inc., Arvada, CO

Project Name: PLU 68

Project Id: 012918002
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Fri Jun-15-18 10:30 am
Report Date: 22-JUN-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	589384-001		589384-002		589384-003		589384-004		589384-005		589384-006	
	Field Id:	SS11		SS12		SS13		SS14		SS3A		SS8A	
	Depth:	6- In		6- In		2- In		2- In		2- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-13-18 13:00		Jun-13-18 13:15		Jun-13-18 15:00		Jun-13-18 15:05		Jun-13-18 15:10		Jun-13-18 13:30	
BTEX by EPA 8021B	*Extracted:*	Jun-20-18 17:00		Jun-20-18 17:00		Jun-20-18 17:00		Jun-20-18 17:00		Jun-20-18 17:00		Jun-20-18 17:00	
	Analyzed:	Jun-21-18 06:55		Jun-21-18 07:14		Jun-21-18 18:58		Jun-21-18 19:16		Jun-21-18 19:35		Jun-21-18 19:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00398	0.00398	<0.00398	0.00398	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300	*Extracted:*	Jun-20-18 11:30		Jun-20-18 11:30		Jun-20-18 11:30		Jun-20-18 12:30		Jun-20-18 12:30		Jun-20-18 12:30	
	Analyzed:	Jun-20-18 14:59		Jun-20-18 15:04		Jun-20-18 15:09		Jun-20-18 15:42		Jun-20-18 15:58		Jun-20-18 16:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		74.4	5.00	390	4.97	<4.90	4.90	<4.99	4.99	<4.99	4.99	<4.99	4.99
TPH by SW8015 Mod	*Extracted:*	Jun-15-18 18:00		Jun-15-18 18:00		Jun-15-18 18:00		Jun-15-18 18:00		Jun-15-18 18:00		Jun-15-18 18:00	
	Analyzed:	Jun-17-18 12:47		Jun-17-18 13:07		Jun-17-18 13:27		Jun-17-18 13:47		Jun-17-18 14:07		Jun-17-18 14:27	
	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	<74.9	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Diesel Range Organics (DRO)		<15.0	15.0	2750	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Oil Range Hydrocarbons (ORO)		<15.0	15.0	276	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Total TPH		<15.0	15.0	3030	74.9	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 589384

LT Environmental, Inc., Arvada, CO

Project Name: PLU 68

Project Id: 012918002
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Fri Jun-15-18 10:30 am
Report Date: 22-JUN-18
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	589384-007		589384-008					
	Field Id:	SS1A		SS15					
	Depth:	2- In		2- In					
	Matrix:	SOIL		SOIL					
	Sampled:	Jun-13-18 16:00		Jun-13-18 16:15					
BTEX by EPA 8021B	***Extracted:***	Jun-20-18 17:00		Jun-20-18 17:00					
	Analyzed:	Jun-21-18 20:12		Jun-21-18 20:30					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00202	0.00202	<0.00201	0.00201				
Toluene		<0.00202	0.00202	<0.00201	0.00201				
Ethylbenzene		<0.00202	0.00202	<0.00201	0.00201				
m,p-Xylenes		<0.00404	0.00404	<0.00402	0.00402				
o-Xylene		<0.00202	0.00202	<0.00201	0.00201				
Total Xylenes		<0.00202	0.00202	<0.00201	0.00201				
Total BTEX		<0.00202	0.00202	<0.00201	0.00201				
Inorganic Anions by EPA 300	***Extracted:***	Jun-20-18 12:30		Jun-20-18 12:30					
	Analyzed:	Jun-20-18 16:15		Jun-20-18 16:20					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		50.6	5.00	<4.98	4.98				
TPH by SW8015 Mod	***Extracted:***	Jun-15-18 18:00		Jun-15-18 18:00					
	Analyzed:	Jun-17-18 14:48		Jun-17-18 15:08					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0				
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0				
Total TPH		<15.0	15.0	<15.0	15.0				

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

Version: 1.%

Jessica Kramer
Project Assistant

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-001	Date Collected:	06.13.18 13.00	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 11.30	Basis:	Wet Weight
Seq Number:	3054083				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.4**	5.00	mg/kg	06.20.18 14.59		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.17.18 12.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.17.18 12.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.17.18 12.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.17.18 12.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.17.18 12.47	
o-Terphenyl	84-15-1	78	%	70-135	06.17.18 12.47	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS11**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-001	Date Collected:	06.13.18 13.00	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.21.18 06.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.21.18 06.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	06.21.18 06.55	
1,4-Difluorobenzene	540-36-3	100	%	70-130	06.21.18 06.55	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-002	Date Collected:	06.13.18 13.15	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 11.30	Basis:	Wet Weight
Seq Number:	3054083				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**390**	4.97	mg/kg	06.20.18 15.04		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<74.9	74.9	mg/kg	06.17.18 13.07	U	5
Diesel Range Organics (DRO)	C10C28DRO	**2750**	74.9	mg/kg	06.17.18 13.07		5
Oil Range Hydrocarbons (ORO)	PHCG2835	**276**	74.9	mg/kg	06.17.18 13.07		5
Total TPH	PHC635	**3030**	74.9	mg/kg	06.17.18 13.07		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.17.18 13.07	
o-Terphenyl	84-15-1	82	%	70-135	06.17.18 13.07	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS12**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-002	Date Collected:	06.13.18 13.15	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.21.18 07.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.21.18 07.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	78	%	70-130	06.21.18 07.14	
1,4-Difluorobenzene	540-36-3	94	%	70-130	06.21.18 07.14	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-003	Date Collected:	06.13.18 15.00	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 11.30	Basis:	Wet Weight
Seq Number:	3054083				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	06.20.18 15.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.17.18 13.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.17.18 13.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.17.18 13.27	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.17.18 13.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.17.18 13.27	
o-Terphenyl	84-15-1	83	%	70-135	06.17.18 13.27	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS13**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-003	Date Collected:	06.13.18 15.00	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.21.18 18.58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.21.18 18.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.21.18 18.58	
1,4-Difluorobenzene	540-36-3	102	%	70-130	06.21.18 18.58	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS14**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-004	Date Collected:	06.13.18 15.05	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 12.30	Basis:	Wet Weight
Seq Number:	3054090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.20.18 15.42	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.17.18 13.47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.17.18 13.47	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.17.18 13.47	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.17.18 13.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.17.18 13.47	
o-Terphenyl	84-15-1	81	%	70-135	06.17.18 13.47	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS14**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-004	Date Collected:	06.13.18 15.05	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.21.18 19.16	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.21.18 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.21.18 19.16	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.21.18 19.16	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS3A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-005	Date Collected:	06.13.18 15.10	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 12.30	Basis:	Wet Weight
Seq Number:	3054090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.20.18 15.58	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.17.18 14.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.17.18 14.07	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.17.18 14.07	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.17.18 14.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.17.18 14.07	
o-Terphenyl	84-15-1	79	%	70-135	06.17.18 14.07	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS3A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-005	Date Collected:	06.13.18 15.10	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.21.18 19.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.21.18 19.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	06.21.18 19.35	
1,4-Difluorobenzene	540-36-3	106	%	70-130	06.21.18 19.35	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS8A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-006	Date Collected:	06.13.18 13.30	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 12.30	Basis:	Wet Weight
Seq Number:	3054090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.20.18 16.09	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.17.18 14.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.17.18 14.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.17.18 14.27	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.17.18 14.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.17.18 14.27	
o-Terphenyl	84-15-1	80	%	70-135	06.17.18 14.27	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS8A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-006	Date Collected:	06.13.18 13.30	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.21.18 19.53	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.21.18 19.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	90	%	70-130	06.21.18 19.53	
4-Bromofluorobenzene	460-00-4	93	%	70-130	06.21.18 19.53	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-007	Date Collected:	06.13.18 16.00	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 12.30	Basis:	Wet Weight
Seq Number:	3054090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**50.6**	5.00	mg/kg	06.20.18 16.15		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.17.18 14.48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.17.18 14.48	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.17.18 14.48	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.17.18 14.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.17.18 14.48	
o-Terphenyl	84-15-1	85	%	70-135	06.17.18 14.48	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS1A**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-007	Date Collected:	06.13.18 16.00	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.21.18 20.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.21.18 20.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	06.21.18 20.12	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.21.18 20.12	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS15**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-008	Date Collected:	06.13.18 16.15	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 12.30	Basis:	Wet Weight
Seq Number:	3054090				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	06.20.18 16.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.15.18 18.00	Basis:	Wet Weight
Seq Number:	3053883				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.17.18 15.08	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.17.18 15.08	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.17.18 15.08	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.17.18 15.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.17.18 15.08	
o-Terphenyl	84-15-1	82	%	70-135	06.17.18 15.08	

Certificate of Analytical Results 589384

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS15**	Matrix:	Soil	Date Received:	06.15.18 10.30
Lab Sample Id:	589384-008	Date Collected:	06.13.18 16.15	Sample Depth:	2 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.20.18 17.00	Basis:	Wet Weight
Seq Number:	3054072				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.21.18 20.30	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.21.18 20.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.21.18 20.30	
4-Bromofluorobenzene	460-00-4	95	%	70-130	06.21.18 20.30	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 589384

LT Environmental, Inc.

PLU 68

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054083 — Matrix: Solid — Date Prep: 06.20.18
MB Sample Id: 7657014-1-BLK — LCS Sample Id: 7657014-1-BKS — LCSD Sample Id: 7657014-1-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	272	109	272	109	90-110	0	20	mg/kg	06.20.18 12:27	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054090 — Matrix: Solid — Date Prep: 06.20.18
MB Sample Id: 7657015-1-BLK — LCS Sample Id: 7657015-1-BKS — LCSD Sample Id: 7657015-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	274	110	275	110	90-110	0	20	mg/kg	06.20.18 15:31	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054083 — Matrix: Soil — Date Prep: 06.20.18
Parent Sample Id: 589362-005 — MS Sample Id: 589362-005 S — MSD Sample Id: 589362-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	413	250	639	90	638	90	90-110	0	20	mg/kg	06.20.18 12:49	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054083 — Matrix: Soil — Date Prep: 06.20.18
Parent Sample Id: 589362-014 — MS Sample Id: 589362-014 S — MSD Sample Id: 589362-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.7	245	268	101	266	100	90-110	1	20	mg/kg	06.20.18 14:05	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054090 — Matrix: Soil — Date Prep: 06.20.18
Parent Sample Id: 589384-004 — MS Sample Id: 589384-004 S — MSD Sample Id: 589384-004 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	255	102	253	101	90-110	1	20	mg/kg	06.20.18 15:47	

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

QC Summary 589384

LT Environmental, Inc.

PLU 68

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3054090 Matrix: Soil Date Prep: 06.20.18
Parent Sample Id: 589385-004 MS Sample Id: 589385-004 S MSD Sample Id: 589385-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	273	249	501	92	501	92	90-110	0	20	mg/kg	06.20.18 17:16	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3053883 Matrix: Solid Date Prep: 06.15.18
MB Sample Id: 7656922-1-BLK LCS Sample Id: 7656922-1-BKS LCSD Sample Id: 7656922-1-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	829	83	869	87	70-135	5	20	mg/kg	06.17.18 11:06	
Diesel Range Organics (DRO)	<15.0	1000	874	87	916	92	70-135	5	20	mg/kg	06.17.18 11:06	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	84		118		124		70-135	%	06.17.18 11:06
o-Terphenyl	89		100		105		70-135	%	06.17.18 11:06

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3053883 Matrix: Soil Date Prep: 06.15.18
Parent Sample Id: 589288-001 MS Sample Id: 589288-001 S MSD Sample Id: 589288-001 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	998	810	81	811	81	70-135	0	20	mg/kg	06.17.18 12:07	
Diesel Range Organics (DRO)	<15.0	998	820	82	820	82	70-135	0	20	mg/kg	06.17.18 12:07	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	113		113		70-135	%	06.17.18 12:07
o-Terphenyl	94		90		70-135	%	06.17.18 12:07

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

QC Summary 589384

LT Environmental, Inc.

PLU 68

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3054072
Matrix: Solid
Date Prep: 06.20.18
MB Sample Id: 7657020-1-BLK
LCS Sample Id: 7657020-1-BKS
LCSD Sample Id: 7657020-1-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	0.0885	89	0.0850	85	70-130	4	35	mg/kg	06.21.18 03:35	
Toluene	<0.00200	0.0998	0.0910	91	0.0896	90	70-130	2	35	mg/kg	06.21.18 03:35	
Ethylbenzene	<0.00200	0.0998	0.0908	91	0.0889	89	70-130	2	35	mg/kg	06.21.18 03:35	
m,p-Xylenes	<0.00399	0.200	0.186	93	0.185	93	70-130	1	35	mg/kg	06.21.18 03:35	
o-Xylene	<0.00200	0.0998	0.0887	89	0.0879	88	70-130	1	35	mg/kg	06.21.18 03:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	124		96		96		70-130	%	06.21.18 03:35
4-Bromofluorobenzene	101		100		105		70-130	%	06.21.18 03:35

Analytical Method: BTEX by EPA 8021B
Prep Method: SW5030B
Seq Number: 3054072
Matrix: Soil
Date Prep: 06.20.18
Parent Sample Id: 589475-003
MS Sample Id: 589475-003 S
MSD Sample Id: 589475-003 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	0.0998	0.0725	73	0.0712	71	70-130	2	35	mg/kg	06.21.18 04:12	
Toluene	<0.00200	0.0998	0.0738	74	0.0766	77	70-130	4	35	mg/kg	06.21.18 04:12	
Ethylbenzene	<0.00200	0.0998	0.0727	73	0.0741	74	70-130	2	35	mg/kg	06.21.18 04:12	
m,p-Xylenes	<0.00399	0.200	0.149	75	0.154	77	70-130	3	35	mg/kg	06.21.18 04:12	
o-Xylene	<0.00200	0.0998	0.0707	71	0.0747	75	70-130	6	35	mg/kg	06.21.18 04:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		101		70-130	%	06.21.18 04:12
4-Bromofluorobenzene	88		111		70-130	%	06.21.18 04:12

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

Final 1.000

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 1

Xenco Quote # | Xenco Job # 589384

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian office
Company Address: 3300 North "A" St, Bldg 2, Unit #103 Midland, TX 79705
Email: Abaker@ltenv.com
Phone No: 432-704-5176
Project Contact: Adrian Baker
Samplers's Name: Daniel Thomas

Project Information

Project Name/Number: PLU 68 / 012918 002
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-2986

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	Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: BTEX	TPH	Chloride	Field Comments
1	SS11	6"	6-13-18	1300	Soil	1								X	X	X	X	
2	SS12	6"		1315														
3	SS13	2'		1500														
4	SS14	2'		1505														
5	SS8A	2'		1510														
6	SS8A	2'		1330														
7	SS1A	2'		1600														
8	SS15	2'		1675														
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY ✓ Standard

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

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UPS: Tracking # 772482759813

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6-13-18 1800	Travis Short			
2						
3	Travis Short	6/14/18	Timothy P. Eldridge	Jamie Wilson	6/14/18 15:30	
4						Kate Lee 6/15/18 1030
5						

Custody Seal # | Preserved where applicable | On Ice ✓ | Cooler Temp. 4.1 R | Thermo. Corr. Factor 0.0

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 loses 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.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/15/2018 10:30:00 AM

Work Order #: 589384

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)?	4.1
#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)?	**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: Katie Lowe Date: 06/15/2018

Checklist reviewed by: Jessica Kramer Date: 06/15/2018

Analytical Report 589754

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 68

012918002

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): **589754**
PLU 68
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) 589754. 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. 589754 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 589754

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS5A	S	06-18-18 15:45	2 ft	589754-001

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 68

Project ID: *012918002*
Work Order Number(s): *589754*

Report Date: *09-JUL-18*
Date Received: *06/20/2018*

Sample receipt non conformances and comments:

NEW VERSION GENERATED 07/09/18. per clients email, correct sample ID. SSSA to SS5A. JKR

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3054380 BTEX by EPA 8021B

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

Certificate of Analysis Summary 589754

LT Environmental, Inc., Arvada, CO

Project Name: PLU 68

Project Id: 012918002
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Wed Jun-20-18 10:35 am
Report Date: 09-JUL-18
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	589754-001					
	Field Id:	SS5A					
	Depth:	2- ft					
	Matrix:	SOIL					
	Sampled:	Jun-18-18 15:45					
BTEX by EPA 8021B	***Extracted:***	Jun-24-18 07:30					
	Analyzed:	Jun-24-18 20:15					
	Units/RL:	mg/kg	RL				
Benzene		<0.00200	0.00200				
Toluene		<0.00200	0.00200				
Ethylbenzene		<0.00200	0.00200				
m,p-Xylenes		<0.00399	0.00399				
o-Xylene		<0.00200	0.00200				
Total Xylenes		<0.00200	0.00200				
Total BTEX		<0.00200	0.00200				
Inorganic Anions by EPA 300	***Extracted:***	Jun-25-18 08:30					
	Analyzed:	Jun-25-18 10:43					
	Units/RL:	mg/kg	RL				
Chloride		132	4.92				
TPH by SW8015 Mod	***Extracted:***	Jun-21-18 12:00					
	Analyzed:	Jun-22-18 07:37					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		1030	15.0				
Oil Range Hydrocarbons (ORO)		88.5	15.0				
Total TPH		1120	15.0				

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

Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analytical Results 589754

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	06.20.18 10.35
Lab Sample Id:	589754-001	Date Collected:	06.18.18 15.45	Sample Depth:	2 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 08.30	Basis:	Wet Weight
Seq Number:	3054491				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**132**	4.92	mg/kg	06.25.18 10.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 07.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1030**	15.0	mg/kg	06.22.18 07.37		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**88.5**	15.0	mg/kg	06.22.18 07.37		1
Total TPH	PHC635	**1120**	15.0	mg/kg	06.22.18 07.37		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	06.22.18 07.37	
o-Terphenyl	84-15-1	86	%	70-135	06.22.18 07.37	

Certificate of Analytical Results 589754

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS5A**	Matrix:	Soil	Date Received:	06.20.18 10.35
Lab Sample Id:	589754-001	Date Collected:	06.18.18 15.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.24.18 07.30	Basis:	Wet Weight
Seq Number:	3054380				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.24.18 20.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.24.18 20.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	79	%	70-130	06.24.18 20.15	
1,4-Difluorobenzene	540-36-3	97	%	70-130	06.24.18 20.15	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 589754

LT Environmental, Inc.

PLU 68

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054491 — Matrix: Solid — Date Prep: 06.25.18
MB Sample Id: 7657208-1-BLK — LCS Sample Id: 7657208-1-BKS — LCSD Sample Id: 7657208-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	237	95	237	95	90-110	0	20	mg/kg	06.25.18 09:43	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054491 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589731-012 — MS Sample Id: 589731-012 S — MSD Sample Id: 589731-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	821	250	993	69	997	70	90-110	0	20	mg/kg	06.25.18 10:00	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054491 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589755-005 — MS Sample Id: 589755-005 S — MSD Sample Id: 589755-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.8	246	253	94	253	94	90-110	0	20	mg/kg	06.25.18 11:15	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054456 — Matrix: Solid — Date Prep: 06.21.18
MB Sample Id: 7657122-1-BLK — LCS Sample Id: 7657122-1-BKS — LCSD Sample Id: 7657122-1-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	880	88	818	82	70-135	7	20	mg/kg	06.21.18 19:34	
Diesel Range Organics (DRO)	<15.0	1000	899	90	876	88	70-135	3	20	mg/kg	06.21.18 19:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		107		127		70-135	%	06.21.18 19:34
o-Terphenyl	82		101		103		70-135	%	06.21.18 19:34

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

QC Summary 589754

LT Environmental, Inc.

PLU 68

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054456 — Matrix: Soil — Date Prep: 06.21.18
Parent Sample Id: 589756-001 — MS Sample Id: 589756-001 S — MSD Sample Id: 589756-001 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	<15.0	0	<15.0	0	70-135	NC	20	mg/kg	06.21.18 20:36	X
Diesel Range Organics (DRO)	36.3	997	31.8	0	33.5	0	70-135	5	20	mg/kg	06.21.18 20:36	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		87		70-135	%	06.21.18 20:36
o-Terphenyl	88		89		70-135	%	06.21.18 20:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054380 — Matrix: Solid — Date Prep: 06.24.18
MB Sample Id: 7657207-1-BLK — LCS Sample Id: 7657207-1-BKS — LCSD Sample Id: 7657207-1-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	0.0855	86	0.0956	96	70-130	11	35	mg/kg	06.24.18 16:36	
Toluene	<0.00200	0.0998	0.0878	88	0.101	101	70-130	14	35	mg/kg	06.24.18 16:36	
Ethylbenzene	<0.00200	0.0998	0.0872	87	0.0999	100	70-130	14	35	mg/kg	06.24.18 16:36	
m,p-Xylenes	<0.00399	0.200	0.181	91	0.209	104	70-130	14	35	mg/kg	06.24.18 16:36	
o-Xylene	<0.00200	0.0998	0.0850	85	0.0983	98	70-130	15	35	mg/kg	06.24.18 16:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		89		95		70-130	%	06.24.18 16:36
4-Bromofluorobenzene	79		84		93		70-130	%	06.24.18 16:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054380 — Matrix: Soil — Date Prep: 06.24.18
Parent Sample Id: 589610-001 — MS Sample Id: 589610-001 S — MSD Sample Id: 589610-001 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	0.0795	80	0.0726	73	70-130	9	35	mg/kg	06.24.18 17:12	
Toluene	<0.00199	0.0996	0.0855	86	0.0791	79	70-130	8	35	mg/kg	06.24.18 17:12	
Ethylbenzene	<0.00199	0.0996	0.0815	82	0.0758	76	70-130	7	35	mg/kg	06.24.18 17:12	
m,p-Xylenes	<0.00398	0.199	0.170	85	0.158	79	70-130	7	35	mg/kg	06.24.18 17:12	
o-Xylene	<0.00199	0.0996	0.0816	82	0.0731	73	70-130	11	35	mg/kg	06.24.18 17:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		74		70-130	%	06.24.18 17:12
4-Bromofluorobenzene	92		82		70-130	%	06.24.18 17:12

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

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143
Service Center- Amarillo, TX (806)678-4514 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

589754

Xenco Quote # | Xenco Job # 589750

Client / Reporting Information

Company Name / Branch: XTE - Permian Office
Company Address: 3300 N. "A" Street, Building 3, Unit 163 Midland, TX 79705
Email: Abaker@tenvi.com Phone No: 432-704-5178
Project Contact: Adrian Baker
Samplers's Name: Daniel Thomas/Travis Short

Project Information

Project Name/Number: PLH 681 012918002
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-2986

Analytical Information

BTEX | TPH | Chloride

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	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	SSSA	2'	6-18-18	1545	Soil	1									X	X	X	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY
- [x] Standard

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

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking # 772511816504

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/18/18 16:20	1			
2					6/19/18 15:30	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp / Thermo. Corr. Factor
			5			X 4.2 NA 0.0

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.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/20/2018 10:35:15 AM

Work Order #: 589754

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)?	4.2
#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: 06/20/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/20/2018
Jessica Kramer

Analytical Report 589935

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 68

012918002

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): **589935**
PLU 68
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) 589935. 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. 589935 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS16	S	06-19-18 15:35	6 In	589935-001
SS17	S	06-19-18 15:40	6 In	589935-002
SS18	S	06-19-18 15:45	6 In	589935-003
SS19	S	06-19-18 15:50	6 In	589935-004
SS20	S	06-19-18 15:55	6 In	589935-005
SS21	S	06-19-18 16:06	6 In	589935-006

CASE NARRATIVE

Client Name: LT Environmental, Inc.
Project Name: PLU 68

Project ID: *012918002*
Work Order Number(s): *589935*

Report Date: *09-JUL-18*
Date Received: *06/21/2018*

Sample receipt non conformances and comments:

NEW VERSION GENERATED 07/09/18. per client email, changed sample 001 from SS18 to SS16 JKR

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3054604 Inorganic Anions by EPA 300
Lab Sample ID 589937-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride 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: 589935-001, -002, -003, -004, -005, -006.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3054624 BTEX by EPA 8021B
Lab Sample ID 589935-001 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: 589935-001, -002, -003, -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.
Ethylbenzene, m,p-Xylenes Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 589935-001, -002, -003, -004, -005

Batch: LBA-3054711 BTEX by EPA 8021B
Ethylbenzene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.
Samples in the analytical batch are: 589935-006

Lab Sample ID 589935-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 589935-006.
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.

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 68

Project ID:	*012918002*	Report Date:	*09-JUL-18*
Work Order Number(s):	*589935*	Date Received:	*06/21/2018*

Certificate of Analysis Summary 589935

LT Environmental, Inc., Arvada, CO

Project Name: PLU 68

Project Id: 012918002
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-21-18 10:16 am
Report Date: 09-JUL-18
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	589935-001		589935-002		589935-003		589935-004		589935-005		589935-006	
	Field Id:	SS16		SS17		SS18		SS19		SS20		SS21	
	Depth:	6- In		6- In		6- In		6- In		6- In		6- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-19-18 15:35		Jun-19-18 15:40		Jun-19-18 15:45		Jun-19-18 15:50		Jun-19-18 15:55		Jun-19-18 16:06	
BTEX by EPA 8021B	*Extracted:*	Jun-25-18 14:30		Jun-25-18 14:30		Jun-25-18 14:30		Jun-25-18 14:30		Jun-25-18 14:30		Jun-26-18 15:15	
	Analyzed:	Jun-26-18 01:23		Jun-26-18 09:01		Jun-26-18 10:13		Jun-26-18 10:31		Jun-26-18 10:50		Jun-27-18 01:29	
	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	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00403	0.00403	<0.00404	0.00404	<0.00401	0.00401	<0.00399	0.00399	<0.00400	0.00400	<0.00398	0.00398
o-Xylene		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300	*Extracted:*	Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00	
	Analyzed:	Jun-25-18 18:51		Jun-25-18 19:08		Jun-25-18 19:13		Jun-25-18 19:29		Jun-25-18 19:35		Jun-25-18 19:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		184	4.93	30.5	4.98	539	4.95	8.55	4.95	34.5	5.00	19.9	4.95
TPH by SW8015 Mod	*Extracted:*	Jun-21-18 12:00		Jun-21-18 12:00		Jun-21-18 12:00		Jun-21-18 12:00		Jun-21-18 12:00		Jun-21-18 12:00	
	Analyzed:	Jun-22-18 01:19		Jun-22-18 01:40		Jun-22-18 02:00		Jun-22-18 02:20		Jun-22-18 07:57		Jun-22-18 08:17	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0	15.3	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		232	14.9	27.7	15.0	34.9	15.0	<15.0	15.0	504	15.0	1180	15.0
Oil Range Hydrocarbons (ORO)		46.2	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	80.4	15.0	76.4	15.0
Total TPH		278	14.9	27.7	15.0	34.9	15.0	15.3	15.0	584	15.0	1260	15.0

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

Jessica Kramer
Project Assistant

Final 1.001

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS16**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-001	Date Collected:	06.19.18 15.35	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**184**	4.93	mg/kg	06.25.18 18.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.22.18 01.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	**232**	14.9	mg/kg	06.22.18 01.19		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**46.2**	14.9	mg/kg	06.22.18 01.19		1
Total TPH	PHC635	**278**	14.9	mg/kg	06.22.18 01.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	81	%	70-135	06.22.18 01.19	
o-Terphenyl	84-15-1	83	%	70-135	06.22.18 01.19	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS16**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-001	Date Collected:	06.19.18 15.35	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.25.18 14.30	Basis:	Wet Weight
Seq Number:	3054624				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	06.26.18 01.23	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.26.18 01.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	06.26.18 01.23	
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.26.18 01.23	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS17**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-002	Date Collected:	06.19.18 15.40	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**30.5**	4.98	mg/kg	06.25.18 19.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 01.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	**27.7**	15.0	mg/kg	06.22.18 01.40		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 01.40	U	1
Total TPH	PHC635	**27.7**	15.0	mg/kg	06.22.18 01.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-135	06.22.18 01.40	
o-Terphenyl	84-15-1	85	%	70-135	06.22.18 01.40	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS17**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-002	Date Collected:	06.19.18 15.40	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.25.18 14.30	Basis:	Wet Weight
Seq Number:	3054624				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	06.26.18 09.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	06.26.18 09.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	06.26.18 09.01	
1,4-Difluorobenzene	540-36-3	99	%	70-130	06.26.18 09.01	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS18**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-003	Date Collected:	06.19.18 15.45	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**539**	4.95	mg/kg	06.25.18 19.13		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 02.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**34.9**	15.0	mg/kg	06.22.18 02.00		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 02.00	U	1
Total TPH	PHC635	**34.9**	15.0	mg/kg	06.22.18 02.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	06.22.18 02.00	
o-Terphenyl	84-15-1	82	%	70-135	06.22.18 02.00	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS18**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-003	Date Collected:	06.19.18 15.45	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.25.18 14.30	Basis:	Wet Weight
Seq Number:	3054624				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.26.18 10.13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.18 10.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.26.18 10.13	
1,4-Difluorobenzene	540-36-3	88	%	70-130	06.26.18 10.13	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS19**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-004	Date Collected:	06.19.18 15.50	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.55**	4.95	mg/kg	06.25.18 19.29		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**15.3**	15.0	mg/kg	06.22.18 02.20		1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.22.18 02.20	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 02.20	U	1
Total TPH	PHC635	**15.3**	15.0	mg/kg	06.22.18 02.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	79	%	70-135	06.22.18 02.20	
o-Terphenyl	84-15-1	78	%	70-135	06.22.18 02.20	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS19**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-004	Date Collected:	06.19.18 15.50	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.25.18 14.30	Basis:	Wet Weight
Seq Number:	3054624				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.26.18 10.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.18 10.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.26.18 10.31	
4-Bromofluorobenzene	460-00-4	96	%	70-130	06.26.18 10.31	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS20**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-005	Date Collected:	06.19.18 15.55	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**34.5**	5.00	mg/kg	06.25.18 19.35		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 07.57	U	1
Diesel Range Organics (DRO)	C10C28DRO	**504**	15.0	mg/kg	06.22.18 07.57		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**80.4**	15.0	mg/kg	06.22.18 07.57		1
Total TPH	PHC635	**584**	15.0	mg/kg	06.22.18 07.57		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.22.18 07.57	
o-Terphenyl	84-15-1	80	%	70-135	06.22.18 07.57	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS20**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-005	Date Collected:	06.19.18 15.55	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.25.18 14.30	Basis:	Wet Weight
Seq Number:	3054624				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	06.26.18 10.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.26.18 10.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	06.26.18 10.50	
1,4-Difluorobenzene	540-36-3	93	%	70-130	06.26.18 10.50	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS21**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-006	Date Collected:	06.19.18 16.06	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.9**	4.95	mg/kg	06.25.18 19.40		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.21.18 12.00	Basis:	Wet Weight
Seq Number:	3054456				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 08.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	**1180**	15.0	mg/kg	06.22.18 08.17		1
Oil Range Hydrocarbons (ORO)	PHCG2835	**76.4**	15.0	mg/kg	06.22.18 08.17		1
Total TPH	PHC635	**1260**	15.0	mg/kg	06.22.18 08.17		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.22.18 08.17	
o-Terphenyl	84-15-1	90	%	70-135	06.22.18 08.17	

Certificate of Analytical Results 589935

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SS21**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589935-006	Date Collected:	06.19.18 16.06	Sample Depth:	6 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.27.18 01.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.27.18 01.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	06.27.18 01.29	
1,4-Difluorobenzene	540-36-3	95	%	70-130	06.27.18 01.29	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 589935

LT Environmental, Inc.

PLU 68

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Solid — Date Prep: 06.25.18
MB Sample Id: 7657314-1-BLK — LCS Sample Id: 7657314-1-BKS — LCSD Sample Id: 7657314-1-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	244	98	240	96	90-110	2	20	mg/kg	06.25.18 17:25	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589935-001 — MS Sample Id: 589935-001 S — MSD Sample Id: 589935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	184	247	398	87	397	86	90-110	0	20	mg/kg	06.25.18 18:57	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589937-001 — MS Sample Id: 589937-001 S — MSD Sample Id: 589937-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.44	250	248	96	252	97	90-110	2	20	mg/kg	06.25.18 17:41	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054456 — Matrix: Solid — Date Prep: 06.21.18
MB Sample Id: 7657122-1-BLK — LCS Sample Id: 7657122-1-BKS — LCSD Sample Id: 7657122-1-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	880	88	818	82	70-135	7	20	mg/kg	06.21.18 19:34	
Diesel Range Organics (DRO)	<15.0	1000	899	90	876	88	70-135	3	20	mg/kg	06.21.18 19:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		107		127		70-135	%	06.21.18 19:34
o-Terphenyl	82		101		103		70-135	%	06.21.18 19:34

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

QC Summary 589935

LT Environmental, Inc.

PLU 68

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054456 — Matrix: Soil — Date Prep: 06.21.18
Parent Sample Id: 589756-001 — MS Sample Id: 589756-001 S — MSD Sample Id: 589756-001 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	<15.0	0	<15.0	0	70-135	NC	20	mg/kg	06.21.18 20:36	X
Diesel Range Organics (DRO)	36.3	997	31.8	0	33.5	0	70-135	5	20	mg/kg	06.21.18 20:36	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	86		87		70-135	%	06.21.18 20:36
o-Terphenyl	88		89		70-135	%	06.21.18 20:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054624 — Matrix: Solid — Date Prep: 06.25.18
MB Sample Id: 7657332-1-BLK — LCS Sample Id: 7657332-1-BKS — LCSD Sample Id: 7657332-1-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	0.0986	98	0.0902	89	70-130	9	35	mg/kg	06.25.18 23:36	
Toluene	<0.00202	0.101	0.102	101	0.0941	93	70-130	8	35	mg/kg	06.25.18 23:36	
Ethylbenzene	<0.00202	0.101	0.102	101	0.0936	93	70-130	9	35	mg/kg	06.25.18 23:36	
m,p-Xylenes	<0.00403	0.202	0.212	105	0.193	96	70-130	9	35	mg/kg	06.25.18 23:36	
o-Xylene	<0.00202	0.101	0.0988	98	0.0918	91	70-130	7	35	mg/kg	06.25.18 23:36	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		108		97		70-130	%	06.25.18 23:36
4-Bromofluorobenzene	88		95		90		70-130	%	06.25.18 23:36

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054711 — Matrix: Solid — Date Prep: 06.26.18
MB Sample Id: 7657386-1-BLK — LCS Sample Id: 7657386-1-BKS — LCSD Sample Id: 7657386-1-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	0.100	99	0.0915	92	70-130	9	35	mg/kg	06.26.18 23:42	
Toluene	<0.00202	0.101	0.105	104	0.0952	95	70-130	10	35	mg/kg	06.26.18 23:42	
Ethylbenzene	<0.00202	0.101	0.104	103	0.0953	95	70-130	9	35	mg/kg	06.26.18 23:42	
m,p-Xylenes	<0.00403	0.202	0.217	107	0.197	99	70-130	10	35	mg/kg	06.26.18 23:42	
o-Xylene	<0.00202	0.101	0.100	99	0.0926	93	70-130	8	35	mg/kg	06.26.18 23:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		109		101		70-130	%	06.26.18 23:42
4-Bromofluorobenzene	93		101		93		70-130	%	06.26.18 23:42

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

QC Summary 589935

LT Environmental, Inc.

PLU 68

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054624 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589935-001 — MS Sample Id: 589935-001 S — MSD Sample Id: 589935-001 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	0.0518	52	0.0517	52	70-130	0	35	mg/kg	06.26.18 00:10	X
Toluene	<0.00199	0.0996	0.0272	27	0.0259	26	70-130	5	35	mg/kg	06.26.18 00:10	X
Ethylbenzene	<0.00199	0.0996	0.0121	12	0.00791	8	70-130	42	35	mg/kg	06.26.18 00:10	XF
m,p-Xylenes	<0.00398	0.199	0.0221	11	0.0143	7	70-130	43	35	mg/kg	06.26.18 00:10	XF
o-Xylene	<0.00199	0.0996	0.0106	11	0.00967	10	70-130	9	35	mg/kg	06.26.18 00:10	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		102		70-130	%	06.26.18 00:10
4-Bromofluorobenzene	86		90		70-130	%	06.26.18 00:10

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054711 — Matrix: Soil — Date Prep: 06.26.18
Parent Sample Id: 589935-006 — MS Sample Id: 589935-006 S — MSD Sample Id: 589935-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0793	79	0.0599	59	70-130	28	35	mg/kg	06.27.18 00:16	X
Toluene	<0.00200	0.100	0.0617	62	0.0439	43	70-130	34	35	mg/kg	06.27.18 00:16	X
Ethylbenzene	<0.00200	0.100	0.0480	48	0.0291	29	70-130	49	35	mg/kg	06.27.18 00:16	XF
m,p-Xylenes	<0.00401	0.200	0.0965	48	0.0610	30	70-130	45	35	mg/kg	06.27.18 00:16	XF
o-Xylene	<0.00200	0.100	0.0454	45	0.0286	28	70-130	45	35	mg/kg	06.27.18 00:16	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		97		70-130	%	06.27.18 00:16
4-Bromofluorobenzene	98		98		70-130	%	06.27.18 00:16

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

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

Page ___ Of ___

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550
www.xenco.com

Xenco Quote # | Xenco Job # 589935

Client / Reporting Information

Company Name / Branch: LT Environmental, Permian Office
Company Address: 3300 N. "A" St., building 1, unit 103, Midland, TX 79705
Email: Abaker@ltenv.com Phone No: 432 204 5178
Project Contact: Adrian Baker
Samplers's Name: Daniel Thomas

Project Information

Project Name/Number: PLU 68 | 01291800J
Project Location: NM
Invoice To: XTO Energy, Kyle Littrell
PO Number: JRP-2986

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	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: BTEX	TPH	Chloride	Field Comments
1	SS16	6"	6-19-18	1535	Soil	1									X	X	X	
2	SS17			1540														
3	SS18			1545														
4	SS19			1550														
5	SS20			1555														
6	SS21			1600														
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY ✓ Standard

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

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking # 785 2817 8266

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6-19-18 1610			6-19-18 17:30	
2						
3	Relinquished by: Connie Wells	Date Time: 6/20/18 15:30	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: ☒ Cooler Temp: 4.2 Thermo. Corr. Factor: 1.000

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.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/21/2018 10:16:00 AM

Work Order #: 589935

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)?	4.2
#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: 06/21/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/21/2018

Jessica Kramer

Analytical Report 589937

for

LT Environmental, Inc.

Project Manager: Adrian Baker

PLU 68

012918002

27-JUN-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)

27-JUN-18

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

Reference: XENCO Report No(s): **589937**
PLU 68
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) 589937. 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. 589937 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS1	S	06-18-18 16:00	5 In	589937-001
SW1	S	06-18-18 16:05	3 - 5 In	589937-002
SW2	S	06-18-18 16:10	3 - 5 In	589937-003
SW3	S	06-18-18 16:15	3 - 5 In	589937-004
SW4	S	06-18-18 16:20	3 - 5 In	589937-005

CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: PLU 68

Project ID: *012918002*
Work Order Number(s): *589937*

Report Date: *27-JUN-18*
Date Received: *06/21/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3054711 BTEX by EPA 8021B

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

Certificate of Analysis Summary 589937

LT Environmental, Inc., Arvada, CO

Project Name: PLU 68

Project Id: 012918002
Contact: Adrian Baker
Project Location: NM

Date Received in Lab: Thu Jun-21-18 10:16 am
Report Date: 27-JUN-18
Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	589937-001		589937-002		589937-003		589937-004		589937-005	
	Field Id:	FS1		SW1		SW2		SW3		SW4	
	Depth:	5- In		3-5 In		3-5 In		3-5 In		3-5 In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-18 16:00		Jun-18-18 16:05		Jun-18-18 16:10		Jun-18-18 16:15		Jun-18-18 16:20	
BTEX by EPA 8021B	*Extracted:*	Jun-26-18 15:15		Jun-26-18 15:15		Jun-26-18 15:15		Jun-26-18 15:15		Jun-26-18 15:15	
	Analyzed:	Jun-27-18 01:48		Jun-27-18 02:06		Jun-27-18 09:46		Jun-27-18 02:40		Jun-27-18 02:58	
	Units/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	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00398	0.00398	<0.00399	0.00399	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200
Inorganic Anions by EPA 300	*Extracted:*	Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00		Jun-25-18 16:00	
	Analyzed:	Jun-25-18 17:36		Jun-25-18 17:52		Jun-25-18 17:57		Jun-25-18 18:03		Jun-25-18 18:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8.44	5.00	13.4	4.98	40.2	4.96	12.2	4.96	17.9	4.93
TPH by SW8015 Mod	*Extracted:*	Jun-22-18 09:00		Jun-22-18 09:00		Jun-22-18 09:00		Jun-22-18 09:00		Jun-22-18 09:00	
	Analyzed:	Jun-22-18 11:43		Jun-22-18 12:44		Jun-22-18 13:04		Jun-22-18 13:24		Jun-22-18 13:45	
	Units/RL:	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	27.6	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	27.6	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Final 1.000

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-001	Date Collected:	06.18.18 16.00	Sample Depth:	5 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**8.44**	5.00	mg/kg	06.25.18 17.36		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.18 09.00	Basis:	Wet Weight
Seq Number:	3054583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 11.43	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.22.18 11.43	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 11.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.22.18 11.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	75	%	70-135	06.22.18 11.43	
o-Terphenyl	84-15-1	81	%	70-135	06.22.18 11.43	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**FS1**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-001	Date Collected:	06.18.18 16.00	Sample Depth:	5 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.27.18 01.48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.18 01.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	111	%	70-130	06.27.18 01.48	
4-Bromofluorobenzene	460-00-4	100	%	70-130	06.27.18 01.48	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW1**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-002	Date Collected:	06.18.18 16.05	Sample Depth:	3 - 5 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.4**	4.98	mg/kg	06.25.18 17.52		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.18 09.00	Basis:	Wet Weight
Seq Number:	3054583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	06.22.18 12.44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	06.22.18 12.44	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9	mg/kg	06.22.18 12.44	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	06.22.18 12.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.22.18 12.44	
o-Terphenyl	84-15-1	82	%	70-135	06.22.18 12.44	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW1**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-002	Date Collected:	06.18.18 16.05	Sample Depth:	3 - 5 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	06.27.18 02.06	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1
Total BTEX		<0.00201	0.00201	mg/kg	06.27.18 02.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	78	%	70-130	06.27.18 02.06	
1,4-Difluorobenzene	540-36-3	85	%	70-130	06.27.18 02.06	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW2**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-003	Date Collected:	06.18.18 16.10	Sample Depth:	3 - 5 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.2**	4.96	mg/kg	06.25.18 17.57		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.18 09.00	Basis:	Wet Weight
Seq Number:	3054583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 13.04	U	1
Diesel Range Organics (DRO)	C10C28DRO	**27.6**	15.0	mg/kg	06.22.18 13.04		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 13.04	U	1
Total TPH	PHC635	**27.6**	15.0	mg/kg	06.22.18 13.04		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	78	%	70-135	06.22.18 13.04	
o-Terphenyl	84-15-1	81	%	70-135	06.22.18 13.04	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW2**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-003	Date Collected:	06.18.18 16.10	Sample Depth:	3 - 5 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	06.27.18 09.46	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1
Total BTEX		<0.00199	0.00199	mg/kg	06.27.18 09.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	70-130	06.27.18 09.46	
1,4-Difluorobenzene	540-36-3	103	%	70-130	06.27.18 09.46	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW3**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-004	Date Collected:	06.18.18 16.15	Sample Depth:	3 - 5 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**12.2**	4.96	mg/kg	06.25.18 18.03		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.18 09.00	Basis:	Wet Weight
Seq Number:	3054583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 13.24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.22.18 13.24	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 13.24	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.22.18 13.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	77	%	70-135	06.22.18 13.24	
o-Terphenyl	84-15-1	81	%	70-135	06.22.18 13.24	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW3**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-004	Date Collected:	06.18.18 16.15	Sample Depth:	3 - 5 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	06.27.18 02.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.18 02.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	88	%	70-130	06.27.18 02.40	
4-Bromofluorobenzene	460-00-4	93	%	70-130	06.27.18 02.40	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW4**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-005	Date Collected:	06.18.18 16.20	Sample Depth:	3 - 5 In

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.25.18 16.00	Basis:	Wet Weight
Seq Number:	3054604				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.9**	4.93	mg/kg	06.25.18 18.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.22.18 09.00	Basis:	Wet Weight
Seq Number:	3054583				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.22.18 13.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	06.22.18 13.45	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	06.22.18 13.45	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	06.22.18 13.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	80	%	70-135	06.22.18 13.45	
o-Terphenyl	84-15-1	83	%	70-135	06.22.18 13.45	

Certificate of Analytical Results 589937

LT Environmental, Inc., Arvada, CO

PLU 68

Sample Id:	**SW4**	Matrix:	Soil	Date Received:	06.21.18 10.16
Lab Sample Id:	589937-005	Date Collected:	06.18.18 16.20	Sample Depth:	3 - 5 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	06.26.18 15.15	Basis:	Wet Weight
Seq Number:	3054711				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	06.27.18 02.58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	06.27.18 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	06.27.18 02.58	
1,4-Difluorobenzene	540-36-3	101	%	70-130	06.27.18 02.58	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

QC Summary 589937

LT Environmental, Inc.

PLU 68

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Solid — Date Prep: 06.25.18
MB Sample Id: 7657314-1-BLK — LCS Sample Id: 7657314-1-BKS — LCSD Sample Id: 7657314-1-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	244	98	240	96	90-110	2	20	mg/kg	06.25.18 17:25	

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589935-001 — MS Sample Id: 589935-001 S — MSD Sample Id: 589935-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	184	247	398	87	397	86	90-110	0	20	mg/kg	06.25.18 18:57	X

Analytical Method: Inorganic Anions by EPA 300 — Prep Method: E300P
Seq Number: 3054604 — Matrix: Soil — Date Prep: 06.25.18
Parent Sample Id: 589937-001 — MS Sample Id: 589937-001 S — MSD Sample Id: 589937-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.44	250	248	96	252	97	90-110	2	20	mg/kg	06.25.18 17:41	

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054583 — Matrix: Solid — Date Prep: 06.22.18
MB Sample Id: 7657318-1-BLK — LCS Sample Id: 7657318-1-BKS — LCSD Sample Id: 7657318-1-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	859	86	842	84	70-135	2	20	mg/kg	06.22.18 11:02	
Diesel Range Organics (DRO)	<15.0	1000	879	88	890	89	70-135	1	20	mg/kg	06.22.18 11:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	78		103		103		70-135	%	06.22.18 11:02
o-Terphenyl	83		96		100		70-135	%	06.22.18 11:02

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

QC Summary 589937

LT Environmental, Inc.

PLU 68

Analytical Method: TPH by SW8015 Mod — Prep Method: TX1005P
Seq Number: 3054583 — Matrix: Soil — Date Prep: 06.22.18
Parent Sample Id: 589937-001 — MS Sample Id: 589937-001 S — MSD Sample Id: 589937-001 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	998	837	84	848	85	70-135	1	20	mg/kg	06.22.18 12:03	
Diesel Range Organics (DRO)	<15.0	998	866	87	879	88	70-135	1	20	mg/kg	06.22.18 12:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	100		106		70-135	%	06.22.18 12:03
o-Terphenyl	95		97		70-135	%	06.22.18 12:03

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054711 — Matrix: Solid — Date Prep: 06.26.18
MB Sample Id: 7657386-1-BLK — LCS Sample Id: 7657386-1-BKS — LCSD Sample Id: 7657386-1-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	0.100	99	0.0915	92	70-130	9	35	mg/kg	06.26.18 23:42	
Toluene	<0.00202	0.101	0.105	104	0.0952	95	70-130	10	35	mg/kg	06.26.18 23:42	
Ethylbenzene	<0.00202	0.101	0.104	103	0.0953	95	70-130	9	35	mg/kg	06.26.18 23:42	
m,p-Xylenes	<0.00403	0.202	0.217	107	0.197	99	70-130	10	35	mg/kg	06.26.18 23:42	
o-Xylene	<0.00202	0.101	0.100	99	0.0926	93	70-130	8	35	mg/kg	06.26.18 23:42	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		109		101		70-130	%	06.26.18 23:42
4-Bromofluorobenzene	93		101		93		70-130	%	06.26.18 23:42

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3054711 — Matrix: Soil — Date Prep: 06.26.18
Parent Sample Id: 589935-006 — MS Sample Id: 589935-006 S — MSD Sample Id: 589935-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0793	79	0.0599	59	70-130	28	35	mg/kg	06.27.18 00:16	X
Toluene	<0.00200	0.100	0.0617	62	0.0439	43	70-130	34	35	mg/kg	06.27.18 00:16	X
Ethylbenzene	<0.00200	0.100	0.0480	48	0.0291	29	70-130	49	35	mg/kg	06.27.18 00:16	XF
m,p-Xylenes	<0.00401	0.200	0.0965	48	0.0610	30	70-130	45	35	mg/kg	06.27.18 00:16	XF
o-Xylene	<0.00200	0.100	0.0454	45	0.0286	28	70-130	45	35	mg/kg	06.27.18 00:16	XF

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	120		97		70-130	%	06.27.18 00:16
4-Bromofluorobenzene	98		98		70-130	%	06.27.18 00:16

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

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 580437

Client / Reporting Information

Company Name / Branch: LT Environmental, Inc. - Permian Office
Company Address: 3300 N "A" St. Building 1, Unit 103, Midland, TX 79705
Email: Abaker@ltenv.com
Phone No: 432 704 5178
Project Contact: Adrian Baker
Samplers's Name: Daniel Thomas

Project Information

Project Name/Number: PLU 68 / 012918002
Project Location: NM
Invoice To: XTO Energy - Kyle Littrell
PO Number: 2RP-2986

Analytical Information

BTEX
TPH
Chloride

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	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TPH	Chloride	Field Comments
1	FS1	5'	6/18/18	1600	Soil	1									X	X	X	
2	SW1	3,5'	↓	1605	↓	↓									↓	↓	↓	
3	SW2	↓	↓	1610	↓	↓									↓	↓	↓	
4	SW3	↓	↓	1615	↓	↓									↓	↓	↓	
5	SW4	↓	↓	1620	↓	↓									↓	↓	↓	
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY
- ☑ Standard

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

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking # 773281782616

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		6/19/18 1610	1	2	6-19-18 17:30	2 Tamir Wells 6/19/18
3	Relinquished by: Tamir Wells	6/20/18 15:30	3	4		4
5	Relinquished by:	Date Time:	5	Custody Seal #	Preserved where applicable	On Ice: X Cooler Temp: 4.2 Thermo. Corr. Factor: 0.0

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 loses 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.

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

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 06/21/2018 10:16:00 AM

Work Order #: 589937

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)?	4.2
#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: 06/21/2018

Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/21/2018

Jessica Kramer

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 199079

COMMENTS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199079
	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
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 199079

CONDITIONS

Operator: BOPCO, L.P. 6401 Holiday Hill Rd Midland, TX 79707	OGRID: 260737
	Action Number: 199079
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	3/21/2023