

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company McElvain Energy, Inc.	Contact: Tony Cooper
Address 1050 17 th Street Ste. 2500, Denver Colorado, 80265	Telephone No: 303-501-0004
Facility Name: EK 30 BS2 Federal Com 1H	Facility Type: Exploration and Production

Surface Owner DOI/BLM	Mineral Owner: DOI/BLM	API No. 30-025-42701
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	30	18S	34E	175	South	860	East	Lea

Latitude 32.71194167 Longitude -103.59384444 NAD83

NATURE OF RELEASE

Type of Release Crude oil	Volume of Release 25 bbls	Volume Recovered 5-10 bbls
Source of Release: Vapor recovery unit / VRT	Date and Hour of Occurrence 4/12/2018... 5:15am	Date and Hour of Discovery 4/12/2018... 6:50 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Ms. Tucker/BLM/CFO, Ms. Lu, NMOCD Hobbs, Wayne Smith BLM/Lessee	
By Whom? Tony Cooper (BLM, OCD) Brian Odell (Mr. Smith)	Date and Hour: 4/20/2018.... 9:00am-11:00am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse: N/A	
If a Watercourse was Impacted, Describe Fully.* N/A		

APPROVED

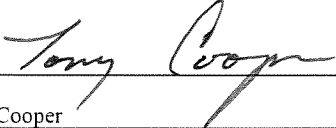

By Olivia Yu at 2:32 pm, Oct 19, 2018

Describe Cause of Problem and Remedial Action Taken.* A third party crude oil hauler shut a production valve on one of the crude oil storage tanks before manually gauging it. The valve was never reopened after the gauging activity was completed. Crude oil flooded the vapor recovery tower (VRT) sending oil to the vapor recovery unit (VRU). The exact source of the release was the 125# relief valve on the VRU fluid scrubber. Since the oil was released into the air, the release coated the production equipment within the lined containment area and a small section of Federal land on the west side of the pad. All free-standing oil was recovered by vacuum truck and properly disposed of at a SWD. Production equipment and storage tanks within the containment were pressure washed and the fluids recovered by vacuum truck and disposed at a SWD. This facility is <1 year old and the containment area is lined with a 20 mil poly liner. The liner was examined after the release and is still like new, so no soil beneath the liner was impacted from this release.

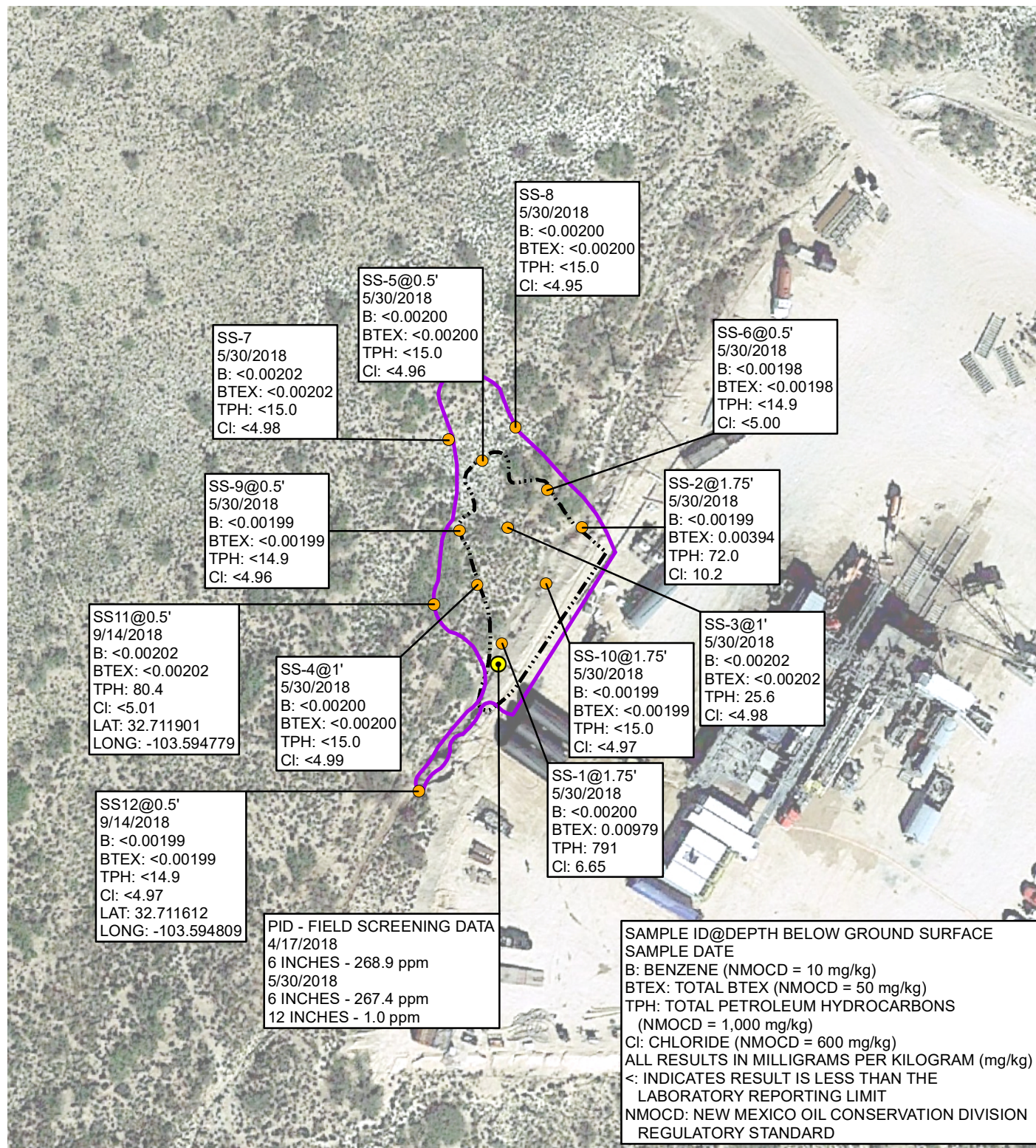
Describe Area Affected and Cleanup Action Taken.* McElvain retained LT Environmental, Inc. (LTE), to oversee environmental remediation at the Site. Heavy equipment was used to remove off-site impacted soil and vegetation and on-site impacted well pad material. LTE collected excavation confirmation soil samples from the excavation and two samples from the overspray area on May 30, 2018. Laboratory analytical results from 10 confirmation samples indicate concentrations of BTEX, TPH, and chloride are below the NMOCD site-specific remediation action levels. McElvain request no further action at this site.

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

OIL CONSERVATION DIVISION

Signature: 	Approved by Environmental Specialist: 	
Printed Name: Tony Cooper	Approval Date: 10/19/2018	Expiration Date: xx/xx/xxxx
Title: Regulatory Coordinator	Conditions of Approval:	
E-mail Address: tonvc@mcelvain.com	BLM approval	Attached <input type="checkbox"/>
Date: 6-28-18	Phone: 303-501-0004	

1RP-5019



LEGEND

- SOIL SAMPLE
- PID FIELD SCREENING LOCATION
- EXCAVATED AREA
- APPROXIMATE RELEASE AREA

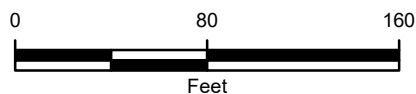


FIGURE 2
SOIL ANALYTICAL RESULTS
EK 30 BS2 FEDERAL COM 1H
UNIT P SEC 30 T18S R34E
LEA COUNTY, NEW MEXICO
MCELVAIN ENERGY, INC.





Certificate of Analysis Summary 599366

LT Environmental, Inc., Arvada, CO

Project Name: EK 30 BS2 Federal Com 1H



Project Id: 034918003
Contact: Adrian Baker
Project Location:

Date Received in Lab: Tue Sep-18-18 09:09 am
Report Date: 27-SEP-18
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	599366-001	599366-002				
	Field Id:	SS11	SS12				
	Depth:	6- In	6- In				
	Matrix:	SOIL	SOIL				
	Sampled:	Sep-14-18 15:30	Sep-14-18 15:35				
BTEX by EPA 8021B	Extracted:	Sep-19-18 08:00	Sep-19-18 08:00				
	Analyzed:	Sep-19-18 17:08	Sep-19-18 15:29				
	Units/RL:	mg/kg RL	mg/kg RL				
	Benzene	<0.00202 0.00202	<0.00199 0.00199				
	Toluene	<0.00202 0.00202	<0.00199 0.00199				
Ethylbenzene		<0.00202 0.00202	<0.00199 0.00199				
m,p-Xylenes		<0.00403 0.00403	<0.00398 0.00398				
o-Xylene		<0.00202 0.00202	<0.00199 0.00199				
Total Xylenes		<0.00202 0.00202	<0.00199 0.00199				
Total BTEX		<0.00202 0.00202	<0.00199 0.00199				
Chloride by EPA 300	Extracted:	Sep-24-18 09:00	Sep-24-18 09:00				
	Analyzed:	Sep-24-18 14:57	Sep-24-18 15:20				
	Units/RL:	mg/kg RL	mg/kg RL				
	Chloride	<5.01 5.01	<4.97 4.97				
TPH By SW8015 Mod	Extracted:	Sep-20-18 14:00	Sep-20-18 14:00				
	Analyzed:	Sep-20-18 22:49	Sep-20-18 23:09				
	Units/RL:	mg/kg RL	mg/kg RL				
	Gasoline Range Hydrocarbons (GRO)	<15.0 15.0	<14.9 14.9				
	Diesel Range Organics (DRO)	80.4 15.0	<14.9 14.9				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<14.9 14.9				
Total TPH		80.4 15.0	<14.9 14.9				

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

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

Version: 1.9%

Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 599366

**for
LT Environmental, Inc.**

Project Manager: Adrian Baker

EK 30 BS2 Federal Com 1H

034918003

27-SEP-18

Collected By: Client



1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)

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

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

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

Xenco-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429)

Xenco-Lakeland: Florida (E84098)



27-SEP-18

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

Reference: XENCO Report No(s): **599366**
EK 30 BS2 Federal Com 1H
Project Address:

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) 599366. 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. 599366 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer
Project Assistant

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

Certified and approved by numerous States and Agencies.

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

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



Sample Cross Reference 599366



LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS11	S	09-14-18 15:30	6 In	599366-001
SS12	S	09-14-18 15:35	6 In	599366-002



CASE NARRATIVE

Client Name: LT Environmental, Inc.

Project Name: EK 30 BS2 Federal Com 1H

Project ID: 034918003
Work Order Number(s): 599366

Report Date: 27-SEP-18
Date Received: 09/18/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3063856 BTEX by EPA 8021B

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



Certificate of Analytical Results 599366



LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id: **SS11**
Lab Sample Id: 599366-001

Matrix: Soil
Date Collected: 09.14.18 15.30

Date Received: 09.18.18 09.09
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: CHE
Seq Number: 3064242

Date Prep: 09.24.18 09.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.01	5.01	mg/kg	09.24.18 14.57	U	1

Analytical Method: TPH By SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3064020

Date Prep: 09.20.18 14.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	09.20.18 22.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	80.4	15.0	mg/kg	09.20.18 22.49		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	09.20.18 22.49	U	1
Total TPH	PHC635	80.4	15.0	mg/kg	09.20.18 22.49		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	09.20.18 22.49	
o-Terphenyl	84-15-1	115	%	70-135	09.20.18 22.49	



Certificate of Analytical Results 599366



LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id: **SS11**
Lab Sample Id: 599366-001

Matrix: Soil
Date Collected: 09.14.18 15.30

Date Received: 09.18.18 09.09
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3063856

Date Prep: 09.19.18 08.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.19.18 17.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.19.18 17.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	09.19.18 17.08		
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.19.18 17.08		



Certificate of Analytical Results 599366



LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id: **SS12**
Lab Sample Id: 599366-002

Matrix: Soil
Date Collected: 09.14.18 15.35

Date Received: 09.18.18 09.09
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300
Tech: SCM
Analyst: CHE
Seq Number: 3064242

Date Prep: 09.24.18 09.00

Prep Method: E300P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	09.24.18 15.20	U	1

Analytical Method: TPH By SW8015 Mod
Tech: ARM
Analyst: ARM
Seq Number: 3064020

Date Prep: 09.20.18 14.00

Prep Method: TX1005P
% Moisture:
Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	09.20.18 23.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	09.20.18 23.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	09.20.18 23.09	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	09.20.18 23.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.20.18 23.09	
o-Terphenyl	84-15-1	109	%	70-135	09.20.18 23.09	



Certificate of Analytical Results 599366



LT Environmental, Inc., Arvada, CO

EK 30 BS2 Federal Com 1H

Sample Id: **SS12**
Lab Sample Id: 599366-002

Matrix: Soil
Date Collected: 09.14.18 15.35

Date Received: 09.18.18 09.09
Sample Depth: 6 In

Analytical Method: BTEX by EPA 8021B

Tech: ALJ

Analyst: ALJ

Seq Number: 3063856

Date Prep: 09.19.18 08.00

Prep Method: SW5030B

% Moisture:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.19.18 15.29	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.19.18 15.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	09.19.18 15.29		
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.19.18 15.29		

- 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 599366

LT Environmental, Inc. EK 30 BS2 Federal Com 1H

Analytical Method: Chloride by EPA 300

Seq Number: 3064242

MB Sample Id: 7662842-1-BLK

Matrix: Solid

LCS Sample Id: 7662842-1-BKS

Prep Method: E300P

Date Prep: 09.24.18

LCSD Sample Id: 7662842-1-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	255	102	255	102	90-110	0	20	mg/kg	09.24.18 10:04	

Analytical Method: Chloride by EPA 300

Seq Number: 3064242

Parent Sample Id: 599366-001

Matrix: Soil

MS Sample Id: 599366-001 S

Prep Method: E300P

Date Prep: 09.24.18

MSD Sample Id: 599366-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.860	251	249	99	248	99	90-110	0	20	mg/kg	09.24.18 15:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3064242

Parent Sample Id: 599515-079

Matrix: Soil

MS Sample Id: 599515-079 S

Prep Method: E300P

Date Prep: 09.24.18

MSD Sample Id: 599515-079 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	47.2	250	325	111	325	111	90-110	0	20	mg/kg	09.24.18 10:29	X

Analytical Method: TPH By SW8015 Mod

Seq Number: 3064020

MB Sample Id: 7662729-1-BLK

Matrix: Solid

LCS Sample Id: 7662729-1-BKS

Prep Method: TX1005P

Date Prep: 09.20.18

LCSD Sample Id: 7662729-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	965	97	967	97	70-135	0	20	mg/kg	09.20.18 15:11	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1000	100	70-135	1	20	mg/kg	09.20.18 15:11	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		112		121		70-135	%	09.20.18 15:11
o-Terphenyl	115		104		111		70-135	%	09.20.18 15:11

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

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

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

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



QC Summary 599366

LT Environmental, Inc. EK 30 BS2 Federal Com 1H

Analytical Method: TPH By SW8015 Mod

Seq Number: 3064020

Parent Sample Id: 599688-001

Matrix: Soil

MS Sample Id: 599688-001 S

Prep Method: TX1005P

Date Prep: 09.20.18

MSD Sample Id: 599688-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	999	948	95	918	92	70-135	3	20	mg/kg	09.20.18 16:11	
Diesel Range Organics (DRO)	<8.12	999	975	98	948	95	70-135	3	20	mg/kg	09.20.18 16:11	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	124		122		70-135	%	09.20.18 16:11
o-Terphenyl	114		106		70-135	%	09.20.18 16:11

Analytical Method: BTEX by EPA 8021B

Seq Number: 3063856

MB Sample Id: 7662663-1-BLK

Matrix: Solid

LCS Sample Id: 7662663-1-BKS

Prep Method: SW5030B

Date Prep: 09.19.18

LCSD Sample Id: 7662663-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.100	100	0.0976	97	70-130	2	35	mg/kg	09.19.18 10:45	
Toluene	<0.00201	0.100	0.0984	98	0.0955	95	70-130	3	35	mg/kg	09.19.18 10:45	
Ethylbenzene	<0.00201	0.100	0.101	101	0.0988	98	70-130	2	35	mg/kg	09.19.18 10:45	
m,p-Xylenes	<0.00402	0.201	0.198	99	0.193	96	70-130	3	35	mg/kg	09.19.18 10:45	
o-Xylene	<0.00201	0.100	0.0970	97	0.0918	91	70-130	6	35	mg/kg	09.19.18 10:45	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		99		93		70-130	%	09.19.18 10:45
4-Bromofluorobenzene	109		123		112		70-130	%	09.19.18 10:45

Analytical Method: BTEX by EPA 8021B

Seq Number: 3063856

Parent Sample Id: 599389-002

Matrix: Soil

MS Sample Id: 599389-002 S

Prep Method: SW5030B

Date Prep: 09.19.18

MSD Sample Id: 599389-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.101	0.0743	74	0.0772	76	70-130	4	35	mg/kg	09.19.18 11:26	
Toluene	<0.00201	0.101	0.0719	71	0.0751	74	70-130	4	35	mg/kg	09.19.18 11:26	
Ethylbenzene	<0.00201	0.101	0.0730	72	0.0763	76	70-130	4	35	mg/kg	09.19.18 11:26	
m,p-Xylenes	<0.00402	0.201	0.143	71	0.149	74	70-130	4	35	mg/kg	09.19.18 11:26	
o-Xylene	<0.00201	0.101	0.0675	67	0.0706	70	70-130	4	35	mg/kg	09.19.18 11:26	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		92		70-130	%	09.19.18 11:26
4-Bromofluorobenzene	116		114		70-130	%	09.19.18 11:26

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

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

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

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

Chain of Custody

Master Order No.:

506264

Project Manager:	Arnon Piter	Bill to: (if different)	
Company Name:	LT Environments	Company Name:	
Address:	3800 N A St	Address:	
City, State ZIP:	Muskegon MI 49757	City, State ZIP:	
Phone:	432-894-5641	Email:	

Work Order Comments	
Program: UST/ST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/> State of Project: Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/> Deliverables: EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other:	

[illegible]

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO₂ Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010:** 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>Carb</i>	<i>[Signature]</i>	9/18/18 9:09am	2		
3			4		
5			6		

Revised Date 05/11/18 Rev. 2018



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: LT Environmental, Inc.

Date/ Time Received: 09/18/2018 09:09:00 AM

Work Order #: 599366

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Brianna Teel

Date: 09/18/2018

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 09/18/2018