



November 18, 2014

Mr. John E. Axelson, P.G.  
East Environmental Supervisor  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, Colorado 80203

**Re: Form 27 Supplemental Report/No Further Action Status Request  
Wierman #5 – Tank Battery  
Facility ID# 320259  
SESE 7-T1S-R67W**

Dear Mr. Axelson:

On behalf of Energy Search Company (Energy Search), LT Environmental, Inc. (LTE) is submitting this Form 27 Supplemental Report to update the Form 27, submitted on October 21, 2014, for the Wierman #5 tank battery. We are requesting a No Further Action (NFA) status for this site.

In response to a Notice of Alleged Violation (NOAV), LTE was contracted by Energy Search to provide environmental sampling activities at the subject site. The environmental sampling activities included collection of a confirmation soil sample from within the tank battery berm, documentation of field activities, and laboratory analytical results review. A topographic Site Location Map is provided as Figure 1.

At the direction of the Colorado Oil and Gas Conservation Commission (COGCC) and in response to the NOAV an LTE representative collected one confirmation soil sample (SS01@1.5') within the tank battery berm at the northwest corner of the production tank at a depth of 1.5 feet below ground surface on November 10, 2014. The soil sample was submitted for Total Petroleum Hydrocarbon (TPH) analysis by United States Environmental Protection Agency (EPA) Methods 8015M and 8260B and benzene, toluene, ethylbenzene, and total xylenes (BTEX) analysis by EPA Method 8260B. The laboratory analytical results indicated that TPH and BTEX concentrations in soil sample SS01@1.5' were below COGCC allowable levels and below the laboratory reporting limits. The soil sample analytical results are summarized in Table 1. The laboratory analytical report is attached. A Site Map showing the general site layout and soil sample location is provided as Figure 2.

The confirmation soil sample analytical results confirm that TPH and BTEX concentrations are below COGCC allowable levels and below laboratory reporting limits



within the tank battery berm. Based on the soil analytical results, LTE is requesting a NFA status for this site on behalf of Energy Search.

Please call us at (303) 433-9788 if you have any questions regarding this letter report or require additional information.

Sincerely,  
LT ENVIRONMENTAL, INC.

A handwritten signature in blue ink that reads "Michael J. Furtaw". The signature is written in a cursive, flowing style.

Michael Furtaw  
Project Geologist

Reviewed by

A handwritten signature in blue ink that reads "Justin Solomon". The signature is written in a cursive, flowing style.

Justin Solomon  
Senior Environmental Scientist

Attachments

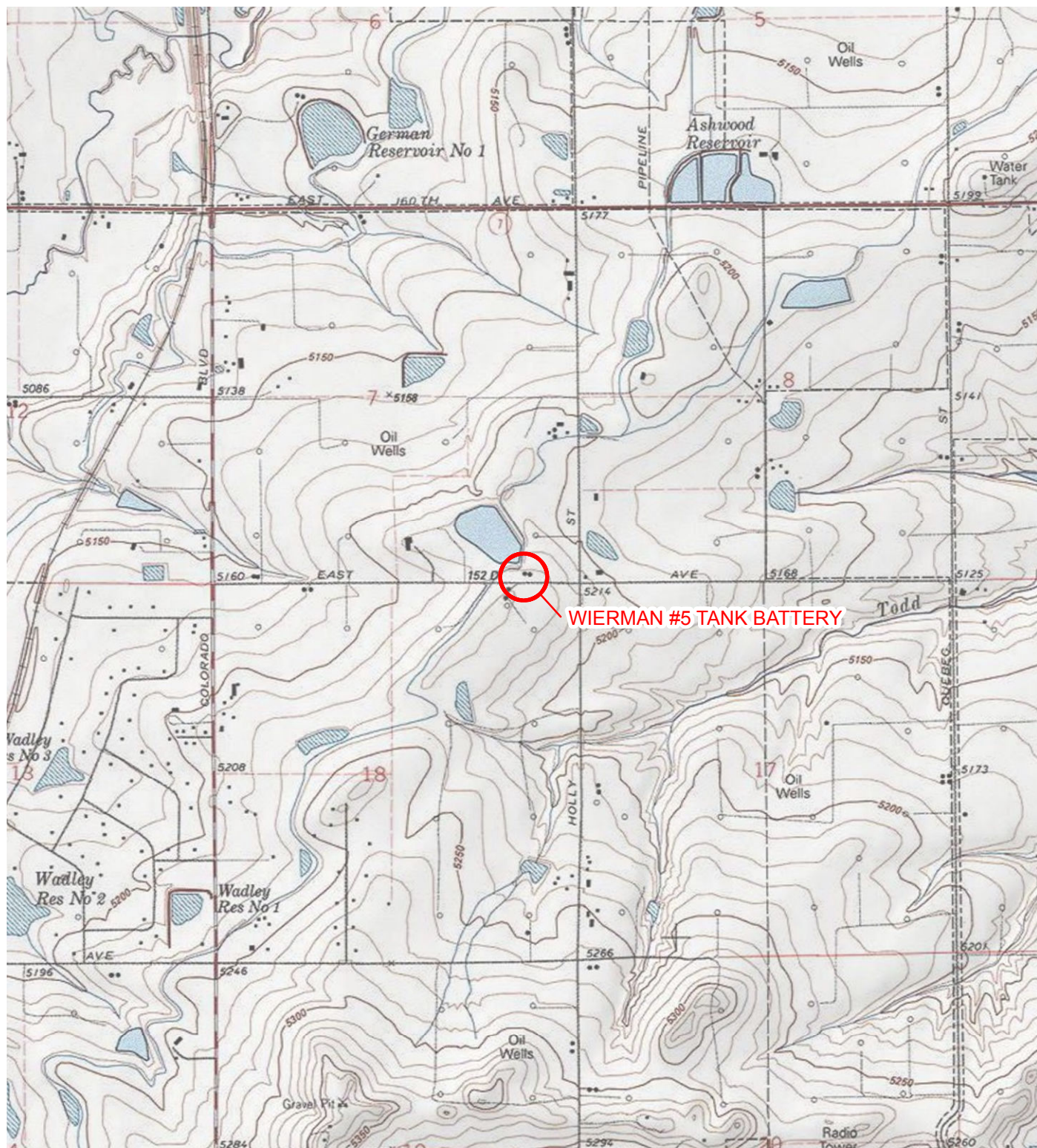
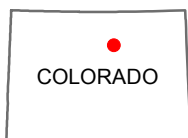
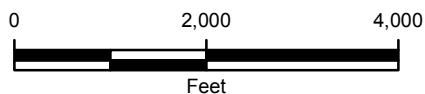


IMAGE COURTESY OF ESRI/USGS

# LEGEND

○ SITE LOCATION



**FIGURE 1**  
**SITE LOCATION MAP**  
**WIERMAN #5 TANK BATTERY**  
**SESE SEC 7-T1S-R67W**  
**ADAMS COUNTY, COLORADO**  
**ENERGY SEARCH COMPANY**





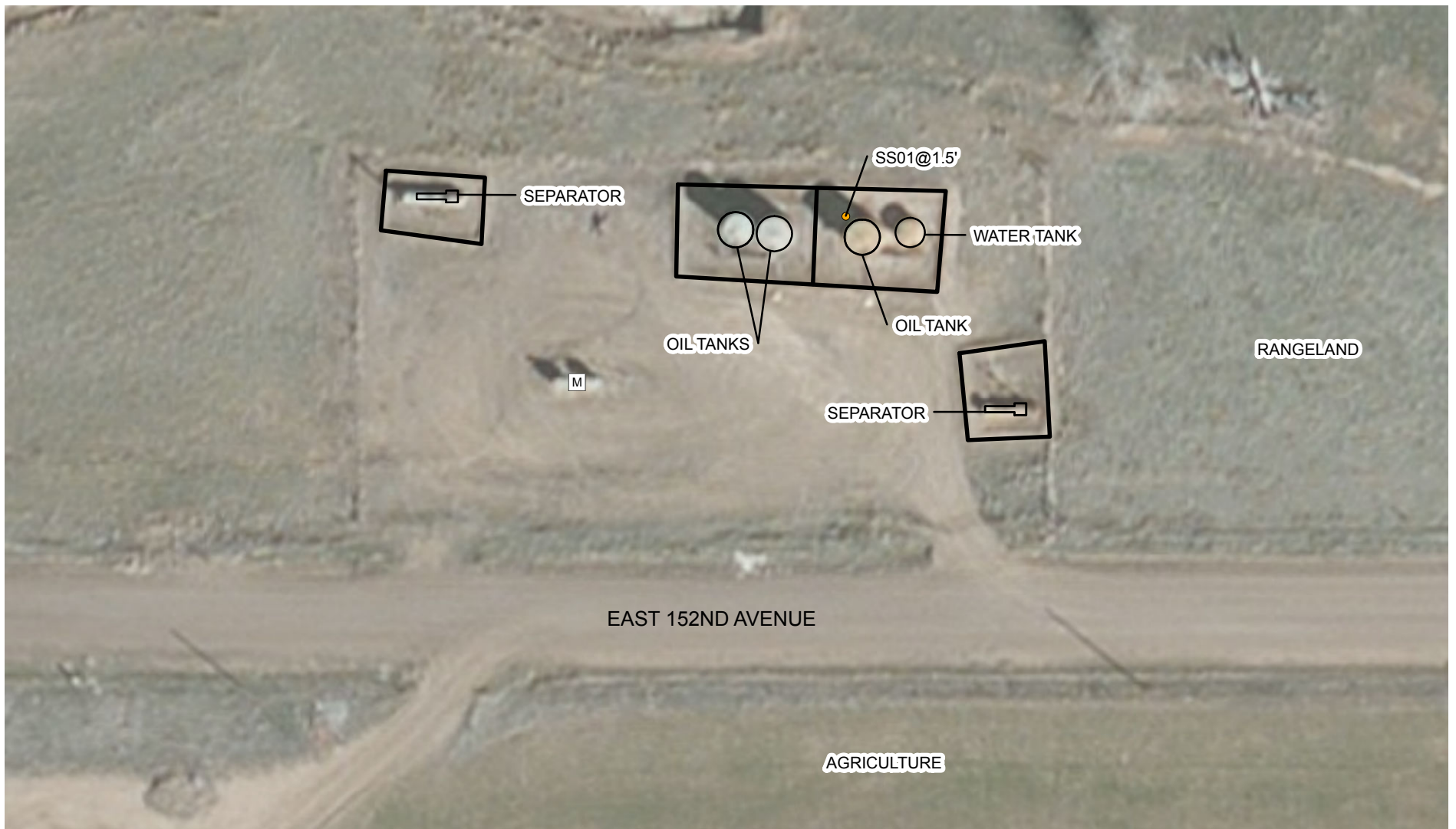
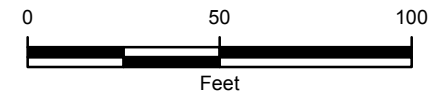


IMAGE COURTESY OF ESRI

## LEGEND

- SOIL SAMPLE
- M METER HOUSE
- BERM



**FIGURE 2**  
**SITE MAP**  
**WIERMAN #5 TANK BATTERY**  
**SESE SEC 7-T1S-R67W**  
**ADAMS COUNTY, COLORADO**  
**ENERGY SEARCH COMPANY**



**TABLE 1**  
**SOIL SAMPLE ANALYTICAL DATA**  
**WIERMAN #5 TANK BATTERY**  
**ENERGY SEARCH COMPANY**

SAMPLE ID	SAMPLE DATE	DEPTH (feet bgs)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	XYLENES (Total) (mg/kg)	TPH-GRO (mg/kg)	TEPH DRO+ORO (mg/kg)
SS01@1.5'	11/10/2014	1.5	<0.002	0.005	0.005	0.005	<50	<50
COGCC Allowable Level			0.17	85	100	175	500	

Notes:

bgs - below ground surface

mg/kg - milligrams per kilogram

TPH - Total Petroleum Hydrocarbons

GRO - Gasoline Range Organics

TEPH - Total Extractable Petroleum Hydrocarbons

DRO - Diesel Range Organics

ORO - Oil Range Organics

< - less than laboratory reporting limit

COGCC - Colorado Oil and Gas Conservation Commission

Results noted in bold exceed COGCC allowable levels.



# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 11, 2014

John Cocroft  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: KMG - Wierman #5

Enclosed are the results of analyses for samples received by Summit Scientific on 11/10/14 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

Reported:  
11/11/14 06:08

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@1.5	1411057-01	Soil	11/10/14 11:55	11/10/14 17:00

# Summit Scientific

S<sub>2</sub>

1411057

741 Corporate Circle, Suite J&K ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LT Environmental, Inc.

Project Manager: ~~John Cocroft~~ Kelly Kenyon

Address: 4600 West 60th Avenue

jcocroft@ltenv.com, munger@ltenv.com, kkenyon@ltenv.com, mhalverson@ltenv.com

City/State/Zip: Arvada, CO 80003

jsolomon@ltenv.com, averbonitz@ltenv.com, jespinoza@ltenv.com, idockter@ltenv.com

Phone: 303-433-9788

Fax: 303-433-1432

Project Name: Wierman Tank Battery #5

Sampler Name: Chad Terry

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	TPH		
1	SS01@1.5	11/10/14	1155	1			X			X			X	X		
2																
3																
4																
5																
6																
7																
8																
9																
10																

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
	11/10/14 1700		11/10/14 1700	Same Day	<input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	<input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours	<input type="checkbox"/>	
				Sample Integrity:		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt:		
				Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

Reported:  
11/11/14 06:08

**SS01@1.5**  
**1411057-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 11/10/14 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	1411101	11/10/14	11/10/14	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 11/10/14 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		96.3 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 11/10/14 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1411099	11/10/14	11/10/14	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/10/14 11:55

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

**Reported:**  
11/11/14 06:08

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 1411101 - EPA 3550A**

**Blank (1411101-BLK1)**

Prepared & Analyzed: 11/10/14

C10-C28 (TEPH-DRO)	ND	50	mg/kg
C28-C36 (TEPH-ORO)	ND	50	"

**LCS (1411101-BS1)**

Prepared & Analyzed: 11/10/14

C10-C28 (TEPH-DRO)	467	50	mg/kg	501	93.3	73-134
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**Matrix Spike (1411101-MS1)**

**Source: 1411057-01**

Prepared & Analyzed: 11/10/14

C10-C28 (TEPH-DRO)	490	50	mg/kg	488	ND	100	50-148
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**Matrix Spike Dup (1411101-MSD1)**

**Source: 1411057-01**

Prepared & Analyzed: 11/10/14

C10-C28 (TEPH-DRO)	489	50	mg/kg	499	ND	98.0	50-148	0.249	13
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Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

Reported:  
11/11/14 06:08

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 1411099 - EPA 5030 Soil MS**

**Blank (1411099-BLK1)**

Prepared & Analyzed: 11/10/14

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0316		"	0.0396		79.8	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.8	21-167			

**LCS (1411099-BS1)**

Prepared & Analyzed: 11/10/14

Benzene	0.114	0.0020	mg/kg	0.100		114	58-130			
Toluene	0.125	0.0050	"	0.100		125	61-134			
Ethylbenzene	0.127	0.0050	"	0.0992		128	74-139			
m,p-Xylene	0.249	0.010	"	0.200		125	73-137			
o-Xylene	0.126	0.0050	"	0.0984		128	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0332		"	0.0396		83.9	23-173			
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.5	21-167			

**Matrix Spike (1411099-MS1)**

Source: 1411057-01

Prepared & Analyzed: 11/10/14

Benzene	0.108	0.0020	mg/kg	0.0942	ND	115	30-131			
Toluene	0.116	0.0050	"	0.0942	ND	123	30-134			
Ethylbenzene	0.120	0.0050	"	0.0934	ND	128	22-153			
m,p-Xylene	0.235	0.010	"	0.188	ND	125	10-159			
o-Xylene	0.119	0.0050	"	0.0927	ND	128	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0321		"	0.0373		86.1	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0377		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0360		"	0.0377		95.7	21-167			

Summit Scientific

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

Reported:  
11/11/14 06:08

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**Batch 1411099 - EPA 5030 Soil MS**

Matrix Spike Dup (1411099-MSD1)		Source: 1411057-01			Prepared & Analyzed: 11/10/14					
Benzene	0.109	0.0020	mg/kg	0.0965	ND	113	30-131	0.797	34	
Toluene	0.120	0.0050	"	0.0965	ND	124	30-134	3.33	30	
Ethylbenzene	0.122	0.0050	"	0.0958	ND	127	22-153	1.65	24	
m,p-Xylene	0.235	0.010	"	0.193	ND	122	10-159	0.155	68	
o-Xylene	0.120	0.0050	"	0.0950	ND	127	31-151	1.21	38	
Surrogate: 1,2-Dichloroethane-d4	0.0331		"	0.0382		86.5	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0386		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0367		"	0.0386		95.0	21-167			

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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Wierman #5

Project Number: [none]  
Project Manager: John Cocroft

**Reported:**  
11/11/14 06:08

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

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Summit Scientific

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A handwritten signature in black ink, appearing to be 'MSM'.

**TABLE 1**  
**SOIL SAMPLE ANALYTICAL DATA**  
**WIERMAN #5 TANK BATTERY**  
**ENERGY SEARCH COMPANY**

SAMPLE ID	SAMPLE DATE	DEPTH (feet bgs)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL- BENZENE (mg/kg)	XYLENES (Total) (mg/kg)	TPH-GRO (mg/kg)	TEPH DRO+ORO (mg/kg)
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GRO - Gasoline Range Organics

TEPH - Total Extractable Petroleum Hydrocarbons

DRO - Diesel Range Organics

ORO - Oil Range Organics

< - less than laboratory reporting limit

COGCC - Colorado Oil and Gas Conservation Commission

Results noted in bold exceed COGCC allowable levels.

