

Summit Scientific

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March 06, 2014

Jake Janicek
LT Environmental, Inc.
4600 West 60th Avenue
Arvada, CO 80003
RE: NEP - 1K

Enclosed are the results of analyses for samples received by Summit Scientific on 03/05/14 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'BS', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
President / Laboratory Manager



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

Project: NEP - 1K

Project Number: 0083-13115
Project Manager: Jake Janicek

Reported:
03/06/14 13:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MB@20.5' bgs	1403023-01	Soil	03/04/14 11:30	03/05/14 15:00
SEW@17.5' bgs	1403023-02	Soil	03/04/14 11:40	03/05/14 15:00

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

Project: NEP - 1K
Project Number: 0083-13115
Project Manager: Jake Janicek

Reported:
03/06/14 13:57

MB@20.5' bgs
1403023-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403034	03/05/14	03/05/14	8015M	

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		86.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1403033	03/05/14	03/05/14	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.021	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %	21-167		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.74	0.0878	mg/kg dry	1	1403040	03/05/14	03/05/14	EPA 6020A	

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MB@20.5' bgs
1403023-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	385	8.66	mg/kg dry	1	1403031	03/05/14	03/05/14	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	233	4.33	"	"	"	"	"	"	
Sodium	1750	13.0	"	"	"	"	"	"	

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	17.4		units	"	1403044	03/05/14	03/05/14	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.41	0.0100	mmhos/cm	1	1403038	03/05/14	03/05/14	SM 2510B	

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.30	0.100	pH Units	"	1403039	03/05/14	03/05/14	EPA 9045	

Date Sampled: **03/04/14 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	"	1403030	03/05/14	03/05/14	% calculation	

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Reported:
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SEW@17.5' bgs
1403023-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1403034	03/05/14	03/05/14	8015M	

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1403033	03/05/14	03/05/14	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane- <i>d</i> 4		102 %	23-173		"	"	"	"	
Surrogate: Toluene- <i>d</i> 8		95.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	21-167		"	"	"	"	

Total Metals by EPA Method 6020 - Dry Weight Basis

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.79	0.0914	mg/kg dry	1	1403040	03/05/14	03/05/14	EPA 6020A	

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Reported:
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SEW@17.5' bgs
1403023-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	359	8.29	mg/kg dry	1	1403031	03/05/14	03/05/14	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	83.5	4.14	"	"	"	"	"	"	
Sodium	2310	12.4	"	"	"	"	"	"	

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	28.5		units	"	1403044	03/05/14	03/05/14	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.22	0.0100	mmhos/cm	1	1403038	03/05/14	03/05/14	SM 2510B	

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.59	0.100	pH Units	"	1403039	03/05/14	03/05/14	EPA 9045	

Date Sampled: **03/04/14 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.7		%	"	1403030	03/05/14	03/05/14	% calculation	

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Project: NEP - 1K
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Reported:
 03/06/14 13:57

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1403034 - EPA 3550A

Blank (1403034-BLK1)				Prepared & Analyzed: 03/05/14						
C10-C28 (DRO)	ND	50	mg/kg							
LCS (1403034-BS1)				Prepared & Analyzed: 03/05/14						
C10-C28 (DRO)	436	50	mg/kg	467		93.2	73-134			
Matrix Spike (1403034-MS1)				Source: 1403023-01 Prepared & Analyzed: 03/05/14						
C10-C28 (DRO)	457	50	mg/kg	480	ND	95.2	50-148			
Matrix Spike Dup (1403034-MSD1)				Source: 1403023-01 Prepared & Analyzed: 03/05/14						
C10-C28 (DRO)	490	50	mg/kg	484	ND	101	50-148	7.07	13	

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

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

Batch 1403033 - EPA 5030 Soil MS

Blank (1403033-BLK1)

Prepared & Analyzed: 03/05/14

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	0.0375		"	0.0397		94.5	23-173			
Surrogate: Toluene-d8	0.0370		"	0.0400		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.7	21-167			

LCS (1403033-BS1)

Prepared & Analyzed: 03/05/14

Benzene	0.0854	0.0020	mg/kg	0.0997		85.7	58-130			
Toluene	0.0933	0.0050	"	0.100		93.3	61-134			
Ethylbenzene	0.100	0.0050	"	0.0992		101	74-139			
m,p-Xylene	0.201	0.010	"	0.200		101	73-137			
o-Xylene	0.0985	0.0050	"	0.0988		99.7	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0367		"	0.0397		92.4	23-173			
Surrogate: Toluene-d8	0.0378		"	0.0400		94.5	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		93.9	21-167			

Matrix Spike (1403033-MS1)

Source: 1403023-01

Prepared & Analyzed: 03/05/14

Benzene	0.0885	0.0020	mg/kg	0.0995	ND	88.9	30-131			
Toluene	0.0941	0.0050	"	0.0998	ND	94.3	30-134			
Ethylbenzene	0.102	0.0050	"	0.0990	ND	103	22-153			
m,p-Xylene	0.226	0.010	"	0.200	0.0161	105	10-159			
o-Xylene	0.105	0.0050	"	0.0986	0.00500	101	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0396		102	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0399		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0399		96.1	21-167			

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

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

Batch 1403033 - EPA 5030 Soil MS

Matrix Spike Dup (1403033-MSD1)	Source: 1403023-01			Prepared & Analyzed: 03/05/14						
Benzene	0.0870	0.0020	mg/kg	0.0989	ND	88.0	30-131	1.72	34	
Toluene	0.0937	0.0050	"	0.0992	ND	94.4	30-134	0.470	30	
Ethylbenzene	0.0992	0.0050	"	0.0984	ND	101	22-153	2.47	24	
m,p-Xylene	0.212	0.010	"	0.198	0.0161	98.6	10-159	6.33	68	
o-Xylene	0.103	0.0050	"	0.0980	0.00500	99.8	31-151	1.86	38	
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0394		100	23-173			
Surrogate: Toluene-d8	0.0377		"	0.0397		95.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0397		95.8	21-167			

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Project: NEP - 1K
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Reported:
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Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1403040 - EPA 3050B

Blank (1403040-BLK1)

Prepared & Analyzed: 03/05/14

Arsenic ND 0.0759 mg/kg wet

LCS (1403040-BS1)

Prepared & Analyzed: 03/05/14

Arsenic 3.63 0.0800 mg/kg wet 3.83 94.8 80-120

Matrix Spike (1403040-MS1)

Source: 1403023-01

Prepared & Analyzed: 03/05/14

Arsenic 8.74 0.0770 mg/kg dry 3.69 8.74 NR 75-125 QM-07

Matrix Spike (1403040-MS2)

Source: 1403021-02

Prepared & Analyzed: 03/05/14

Arsenic 7.62 0.181 mg/kg wet 8.69 0.0849 86.6 75-125

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Project: NEP - 1K
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Reported:
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Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

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

Batch 1403031 - General Preparation

Blank (1403031-BLK1)

Prepared & Analyzed: 03/05/14

Calcium	ND	10.0	mg/kg wet						
Magnesium	ND	5.00	"						
Sodium	ND	15.0	"						

LCS (1403031-BS1)

Prepared & Analyzed: 03/05/14

Calcium	326	10.0	mg/kg wet	378	86.1	80-120			
Magnesium	157	5.00	"	190	82.6	80-120			
Sodium	435	15.0	"	473	91.9	80-120			

LCS Dup (1403031-BSD1)

Prepared & Analyzed: 03/05/14

Calcium	326	10.0	mg/kg wet	366	89.0	80-120	0.0174	20	
Magnesium	159	5.00	"	184	86.8	80-120	1.70	20	
Sodium	447	15.0	"	458	97.5	80-120	2.62	20	

Matrix Spike (1403031-MS1)

Source: 1403011-01

Prepared & Analyzed: 03/05/14

Calcium	832	11.8	mg/kg dry	422	464	87.2	75-125		
Magnesium	302	5.91	"	212	134	79.4	75-125		
Sodium	630	17.7	"	528	88.8	102	75-125		

Matrix Spike Dup (1403031-MSD1)

Source: 1403011-01

Prepared & Analyzed: 03/05/14

Calcium	749	11.8	mg/kg dry	442	464	64.5	75-125	10.5	25	QM-07
Magnesium	248	5.91	"	222	134	51.5	75-125	19.6	25	QM-07
Sodium	580	17.7	"	553	88.8	88.9	75-125	8.16	25	

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Reported:
03/06/14 13:57

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

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

Batch 1403030 - General Preparation

Duplicate (1403030-DUP1)	Source: 1403023-01			Prepared & Analyzed: 03/05/14							
% Solids	85.6		%		85.7				0.117		20

Batch 1403038 - General Preparation

Blank (1403038-BLK1)	Prepared & Analyzed: 03/05/14										
Specific Conductance (EC)	ND	0.0100	mmhos/cm								
Duplicate (1403038-DUP1)	Source: 1403023-01			Prepared & Analyzed: 03/05/14							
Specific Conductance (EC)	5.52	0.0100	mmhos/cm		5.41				1.98		20

Batch 1403039 - General Preparation

LCS (1403039-BS1)	Prepared & Analyzed: 03/05/14										
pH	7.99	0.100	pH Units	8.00	99.9	0-200					
Duplicate (1403039-DUP1)	Source: 1403023-01			Prepared & Analyzed: 03/05/14							
pH	8.11	0.100	pH Units		7.30				10.5		20

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Project: NEP - 1K

Project Number: 0083-13115
Project Manager: Jake Janicek

Reported:
03/06/14 13:57

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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