

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 13, 2018

Jeremy Pike

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: Garden Creek 16-23H

Enclosed are the results of analyses for samples received by Summit Scientific on 11/09/18 17:05. 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 For Ben Shrewsbury

Laboratory Manager



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

Project: Garden Creek 16-23H

Project Number: [none]
Project Manager: Jeremy Pike

Reported:
11/13/18 14:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03	1811116-01	Soil	11/09/18 12:26	11/09/18 17:05

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.

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S₂

1811116

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: LT Environmental

Project Manager: Jeremy Pike

Address: 4600 W 60th Ave

E-Mail: J Pike @ Ltenv. com

City/State/Zip: Arvada CO 80003

Phone: 303-433-9222

Project Name: Garden Creek 16-23H

Sampler Name: Drew Bullinger

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	GBTEX	TPH-DRO							
1	SSO 3	4/9/18	12:26	3			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: on ice
<u>Drew Bullinger</u>	<u>4/9/18</u> <u>17:05</u>	<u>[Signature]</u>	<u>4/9/18</u> <u>17:05</u>	Same Day	72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
				48 hours	<u>X</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
				Temperature Upon Receipt: <u>6.8</u>		
				Samples Intact: <u>(Yes)</u> No		

Sample Receipt Checklist

S2 Work Order 1811116

Client: LTE Client Project ID: Garden Creek 16-231t

Shipped Via: (H.D.) P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

Matrix (check all that apply): Air ✓ Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>6.8</u>
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	✓			on ice
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?	✓			48hr
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AT
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

11-9-18 07:05
Date/Time



LT Environmental, Inc.
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Arvada CO, 80003

Project: Garden Creek 16-23H

Project Number: [none]
Project Manager: Jeremy Pike

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11/13/18 14:11

SS03
181116-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/09/18 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	1811149	11/12/18	11/13/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **11/09/18 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		83.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.1 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/09/18 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	430	50	mg/kg	1	1811147	11/12/18	11/13/18	EPA 8015M	

Date Sampled: **11/09/18 12:26**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

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Project: Garden Creek 16-23H

Project Number: [none]
Project Manager: Jeremy Pike

Reported:
11/13/18 14:11

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 1811149 - EPA 5030 Soil MS

Blank (1811149-BLK1)

Prepared: 11/12/18 Analyzed: 11/13/18

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0332		"	0.0396		83.9	23-173			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1	21-167			

LCS (1811149-BS1)

Prepared: 11/12/18 Analyzed: 11/13/18

Benzene	0.102	0.0020	mg/kg	0.100		102	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.105	0.0050	"	0.100		105	70-130			
m,p-Xylene	0.211	0.010	"	0.200		106	70-130			
o-Xylene	0.104	0.0050	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0336		"	0.0396		84.8	23-173			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	21-167			

Matrix Spike (1811149-MS1)

Source: 181114-01

Prepared: 11/12/18 Analyzed: 11/13/18

Benzene	0.0914	0.0020	mg/kg	0.100	ND	91.4	70-130			
Toluene	0.0887	0.0050	"	0.100	ND	88.7	70-130			
Ethylbenzene	0.0859	0.0050	"	0.100	ND	85.9	70-130			
m,p-Xylene	0.169	0.010	"	0.200	ND	84.4	70-130			
o-Xylene	0.0866	0.0050	"	0.100	ND	86.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0333		"	0.0396		84.0	23-173			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.4	20-170			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	21-167			

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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 1811149 - EPA 5030 Soil MS

Matrix Spike Dup (1811149-MSD1)		Source: 1811114-01			Prepared: 11/12/18 Analyzed: 11/13/18					
Benzene	0.100	0.0020	mg/kg	0.100	ND	100	70-130	9.26	30	
Toluene	0.0970	0.0050	"	0.100	ND	97.0	70-130	8.89	30	
Ethylbenzene	0.0920	0.0050	"	0.100	ND	92.0	70-130	6.85	30	
m,p-Xylene	0.181	0.010	"	0.200	ND	90.5	70-130	6.98	30	
o-Xylene	0.0924	0.0050	"	0.100	ND	92.4	70-130	6.40	30	
Surrogate: 1,2-Dichloroethane-d4	0.0332		"	0.0396		83.8	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	21-167			

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Project Number: [none]
Project Manager: Jeremy Pike

Reported:
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1811147 - EPA 3550A

Blank (1811147-BLK1)

Prepared & Analyzed: 11/12/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1811147-BS1)

Prepared & Analyzed: 11/12/18

C10-C28 (DRO) 435 50 mg/kg 500 87.0 70-130

Matrix Spike (1811147-MS1)

Source: 181114-01

Prepared & Analyzed: 11/12/18

C10-C28 (DRO) 563 50 mg/kg 500 209 70.7 70-130

Matrix Spike Dup (1811147-MSD1)

Source: 181114-01

Prepared & Analyzed: 11/12/18

C10-C28 (DRO) 540 50 mg/kg 500 209 66.1 70-130 4.19 20 QM-07

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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