

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 03, 2019

Jeremy Pike

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: Garden Creek 16-2314H

Work Order # 1909265

Enclosed are the results of analyses for samples received by Summit Scientific on 09/20/19 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premer".

Muri Premer For Ben Shrewsbury

Laboratory Manager



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

Project: Garden Creek 16-2314H

Project Number: 0273-18135

Project Manager: Jeremy Pike

**Reported:**  
10/03/19 11:24

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01	1909265-01	Soil	09/20/19 13:43	09/20/19 16:00

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

1909265

4653 Table Mountain Drive ♦ Golden, Colorado 80403  
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: LT Environmental, Inc.

Project Manager: Jeremy Pike

Address: 4600 West 60th Avenue

E-Mail: [jpike@ltenv.com](mailto:jpike@ltenv.com)

City/State/Zip: Arvada, Colorado 80003


Phone: 303-433-9788

Project Name: Garden Creek 16-2314H

Sampler Name: Drew Buller

Project Number: 027318135

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	GBTEX	TPH-DRO	EC	pH	SAR					
1	SS01	9/20/19	13:43	2			x			x						x	x					
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: Drew Buller	Date/Time: 9/20/19 16:00	Received by: 	Date/Time: 9-20-19 16:00	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	ON ICE
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 13.0 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

1909265

## Sample Receipt Checklist

S2 Work Order \_\_\_\_\_

Client: LT EnvironmentalClient Project ID: Garden Creek 16-2314 HShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: \_\_\_\_\_
☒ ☐ ☐ ☐ ☐
Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Temp (°C)	13.0
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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 <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):   				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

MP

Custodian Printed Name or Initials

*Muri Premer*  
Signature of Custodian

9/20/19

Date/Time



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**Reported:**  
10/03/19 11:24

**SS01**  
**1909265-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **09/20/19 13:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>1040</b>	10.9	mg/kg dry	1	1910006	10/01/19	10/01/19	EPA 6020B	
Magnesium	<b>150</b>	5.43	"	"	"	"	"	"	
Sodium	<b>22.8</b>	5.43	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/20/19 13:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	<b>0.175</b>	0.100	units	1	1910051	10/03/19	10/03/19	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **09/20/19 13:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>92.1</b>		%	1	1910016	10/02/19	10/03/19	Calculation	
pH	<b>8.84</b>		pH Units	"	1909379	09/26/19	09/26/19	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **09/20/19 13:43**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	<b>0.271</b>	0.0100	mmhos/cm	1	1909380	09/26/19	09/26/19	EPA 120.1	

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Project Number: 0273-18135

Project Manager: Jeremy Pike

**Reported:**  
10/03/19 11:24

**Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control**

**Summit Scientific**

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

**Batch 1910006 - General Preparation**

**Blank (1910006-BLK1)**

Prepared & Analyzed: 10/01/19

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

**LCS (1910006-BS1)**

Prepared & Analyzed: 10/01/19

Calcium	512	10.0	mg/kg wet	500	102	70-130
Magnesium	538	5.00	"	500	108	70-130
Sodium	491	5.00	"	500	98.2	70-130

**Duplicate (1910006-DUP1)**

Source: 1909265-01

Prepared & Analyzed: 10/01/19

Calcium	1010	10.9	mg/kg dry	1040	3.42	20
Magnesium	142	5.43	"	150	5.73	20
Sodium	25.3	5.43	"	22.8	10.2	20

**Matrix Spike (1910006-MS1)**

Source: 1909265-01

Prepared & Analyzed: 10/01/19

Calcium	1520	10.9	mg/kg dry	543	1040	88.3	70-130
Magnesium	666	5.43	"	543	150	95.1	70-130
Sodium	565	5.43	"	543	22.8	100	70-130

**Matrix Spike Dup (1910006-MSD1)**

Source: 1909265-01

Prepared & Analyzed: 10/01/19

Calcium	1740	10.9	mg/kg dry	543	1040	128	70-130	13.3	25
Magnesium	646	5.43	"	543	150	91.3	70-130	3.10	25
Sodium	560	5.43	"	543	22.8	99.0	70-130	0.958	25

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

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

**Batch 1909379 - General Preparation**

**LCS (1909379-BS1)**

Prepared & Analyzed: 09/26/19

pH	9.38		pH Units	9.18	102	95-105
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**Duplicate (1909379-DUP1)**

**Source: 1909259-21**

Prepared & Analyzed: 09/26/19

pH	8.72		pH Units	8.70	0.230	20
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**Batch 1910016 - General Preparation**

**Duplicate (1910016-DUP1)**

**Source: 1909265-01**

Prepared: 10/02/19 Analyzed: 10/03/19

% Solids	92.5		%	92.1	0.418	20
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Project Number: 0273-18135  
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**Reported:**  
10/03/19 11:24

**Specific Conductance by EPA Method 120.1 - Quality Control**  
**Summit Scientific**

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

**Batch 1909380 - General Preparation**

**Blank (1909380-BLK1)**

Prepared & Analyzed: 09/26/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (1909380-BS1)**

Prepared & Analyzed: 09/26/19

Specific Conductance (EC) 0.708 0.0100 mmhos/cm 0.750 94.4 90-110

**Duplicate (1909380-DUP1)**

**Source: 1909259-21**

Prepared & Analyzed: 09/26/19

Specific Conductance (EC) 0.301 0.0100 mmhos/cm 0.299 0.634 20

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### 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