

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 08, 2019

Andy Verbonitz

LT Environmental, Inc.

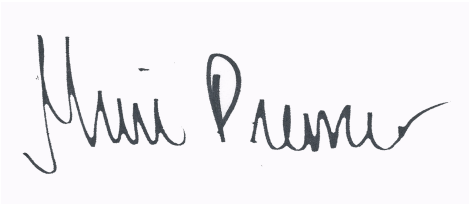
4600 West 60th Avenue

Arvada, CO 80003

RE: Cockrofit Spreadfield

Enclosed are the results of analyses for samples received by Summit Scientific on 02/04/19 08:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Ben Shrewsbury

Laboratory Manager



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

Project: Cockroft Spreadfield

Project Number: 062318003
Project Manager: Andy Verbonitz

Reported:
02/08/19 09:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
CompBG-1	1902020-01	Soil	02/01/19 13:00	02/04/19 08:00
CompBG-2	1902020-02	Soil	02/01/19 13:10	02/04/19 08:00

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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

1902020

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

Page 1 of 1

Client: LT Environmental Project Manager: A. Verbontz
 Address: 4600 W 60th Ave E-Mail: avverbontz@ltenv.com
 City/State/Zip: Arvada / CO / 80003
 Phone: 303-433-9788 Fax: Project Name: Cockroft + Spread Field
 Sampler Name: J. Braden Project Number: 062318003

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions		
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	pH	EC	SAR				
1	Comp BG-1	2-1-19	1300	2			X			X				X	X	X			
2	Comp BG-2	2-1-19	1310	2			X			X				X	X	X			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <u>[Signature]</u>	Date/Time: <u>2/4/19 800</u>	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by: <u>[Signature]</u>	Date/Time: <u>2-4-19 800</u>	24 hours <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	72 hours <input type="checkbox"/>
				Standard <input checked="" type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: <u>49.5</u>	
				Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

Sample Receipt Checklist

S2 Work Order 1902020

Client: LT Client Project ID: Cockroft Springfield

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>4.5</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.	<input checked="" type="checkbox"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

Custodian Printed Name or Initials

Signature of Custodian

2-4-19 800
Date/Time



LT Environmental, Inc.
4600 West 60th Avenue
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Project: Cockroft Spreadfield

Project Number: 062318003
Project Manager: Andy Verbonitz

Reported:
02/08/19 09:45

CompBG-1
1902020-01 (Soil)

Summit Scientific

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

Date Sampled: **02/01/19 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	3090	13.8	mg/kg dry	1	1902059	02/05/19	02/05/19	EPA 6020B	
Magnesium	1040	6.91	"	"	"	"	"	"	
Sodium	6750	6.91	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/01/19 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	26.8	0.100	units	1	1902105	02/07/19	02/07/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/01/19 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	72.4		%	1	1902068	02/06/19	02/06/19	Calculation	
pH	8.10		pH Units	"	1902070	02/06/19	02/06/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **02/01/19 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	55.6	0.0100	mmhos/cm	1	1902069	02/06/19	02/06/19	EPA 120.1	

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4600 West 60th Avenue
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Project: Cockroft Spreadfield

Project Number: 062318003
Project Manager: Andy Verbonitz

Reported:
02/08/19 09:45

CompBG-2
1902020-02 (Soil)

Summit Scientific

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

Date Sampled: **02/01/19 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	2080	13.6	mg/kg dry	1	1902059	02/05/19	02/05/19	EPA 6020B	
Magnesium	713	6.78	"	"	"	"	"	"	
Sodium	5120	6.78	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **02/01/19 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	24.7	0.100	units	1	1902105	02/07/19	02/07/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **02/01/19 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	73.7		%	1	1902068	02/06/19	02/06/19	Calculation	
pH	8.24		pH Units	"	1902070	02/06/19	02/06/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **02/01/19 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	51.6	0.0100	mmhos/cm	1	1902069	02/06/19	02/06/19	EPA 120.1	

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

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

Batch 1902059 - General Preparation

Blank (1902059-BLK1)

Prepared & Analyzed: 02/05/19

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

LCS (1902059-BS1)

Prepared & Analyzed: 02/05/19

Calcium	543	10.0	mg/kg wet	500		109	70-130
Magnesium	548	5.00	"	500		110	70-130
Sodium	579	5.00	"	500		116	70-130

Duplicate (1902059-DUP1)

Source: 1902009-14

Prepared & Analyzed: 02/05/19

Calcium	6530	11.0	mg/kg dry		7240		10.3	20
Magnesium	360	5.49	"		404		11.6	20
Sodium	118	5.49	"		137		14.7	20

Matrix Spike (1902059-MS1)

Source: 1902009-14

Prepared & Analyzed: 02/05/19

Calcium	7660	11.0	mg/kg dry	549	7240	77.4	70-130
Magnesium	986	5.49	"	549	404	106	70-130
Sodium	738	5.49	"	549	137	109	70-130

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Reported:
02/08/19 09:45

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

Summit Scientific

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

Batch 1902068 - General Preparation

Duplicate (1902068-DUP1)		Source: 1902009-14			Prepared & Analyzed: 02/06/19			
% Solids	91.0		%		91.1		0.109	20

Batch 1902070 - General Preparation

LCS (1902070-BS1)					Prepared & Analyzed: 02/06/19		
pH	9.26		pH Units	9.23		100	95-105
Duplicate (1902070-DUP1)		Source: 1902007-01			Prepared & Analyzed: 02/06/19		
pH	8.78		pH Units	8.71		0.800	20

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Project: Cockroft Spreadfield

Project Number: 062318003
 Project Manager: Andy Verbonitz

Reported:
 02/08/19 09:45

Specific Conductance by EPA Method 120.1 - Quality Control

Summit Scientific

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

Batch 1902069 - General Preparation

Blank (1902069-BLK1)

Prepared & Analyzed: 02/06/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1902069-BS1)

Prepared & Analyzed: 02/06/19

Specific Conductance (EC) 0.784 0.0100 mmhos/cm 0.750 105 90-110

Duplicate (1902069-DUP1)

Source: 1902007-01

Prepared & Analyzed: 02/06/19

Specific Conductance (EC) 0.487 0.0100 mmhos/cm 0.499 2.42 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