

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 11, 2017

Chris Purcell  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: Propst #2

Enclosed are the results of analyses for samples received by Summit Scientific on 10/06/17 17:50. 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: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Comp01	1710070-01	Soil	10/06/17 13:00	10/06/17 17:50
Comp02	1710070-02	Soil	10/06/17 13:15	10/06/17 17:50
Comp03	1710070-03	Soil	10/06/17 13:30	10/06/17 17:50
Comp04	1710070-04	Soil	10/06/17 13:45	10/06/17 17:50
Comp05	1710070-05	Soil	10/06/17 14:00	10/06/17 17:50

Summit Scientific

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# Summit Scientific

S<sub>2</sub>

1710070

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401

303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: LTE

Project Manager: Chris Purcell, Hank Raizen

Address: 4600 W. 60th Avenue

E-Mail: Cpurcell@itenv.com, Hraizen@itenv.com

City/State/Zip: Arvada, CO 80003

Phone: (303) 433-9788

Fax:

Project Name: Propst #2

Sampler Name: B. Finn

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)	EC	pH	SAR						
1	Comp01	10/06/17	1300	2			x			x				x	x	x					
2	Comp02	↓	1315	↓			↓			↓				↓	↓	↓					
3	Comp03	↓	1330	↓			↓			↓				↓	↓	↓					
4	Comp04	↓	1345	↓			↓			↓				↓	↓	↓					
5	Comp05	↓	1400	↓			↓			↓				↓	↓	↓					
6																					
7																					
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes: <u>Results Thursday Please</u>
<u>B. Finn</u>	<u>10/06/2017 1750</u>	<u>[Signature]</u>	<u>10-6-17 17:50</u>	Same Day	<u>72 hours</u> <u>x</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:	
				Intact: <u>Yes</u> No	<u>16.6</u>	

1710070

## Sample Receipt Checklist

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

Client: LIE Client Project ID: PROPST #2Shipped Via: H.D. ONICE Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)Matrix (check all that apply):      Air   X   Soil/Solid      Water      Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)	16.6				

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.	✓			
Were all samples received intact <sup>(1)</sup> ?	✓			
Was adequate sample volume provided <sup>(1)</sup> ?	✓			
If custody seals are present, are they intact <sup>(1)</sup> ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	✓			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	✓			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	✓			
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>			✓	
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			✓	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Muri P.  
Custodian Printed NameBA 10-6-17  
Signature or Initials of Custodian18:00  
Date/Time



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

Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

**Comp01**  
**1710070-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/06/17 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	1750	11.6	mg/kg dry	1	1710081	10/09/17	10/09/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	142	5.78	"	"	"	"	"	"	
Sodium	3360	5.78	"	"	"	"	"	"	
Sodium Adsorption Ratio	20.8		units	"	1710120	10/11/17	10/11/17	"	

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

Date Sampled: **10/06/17 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.40	0.100	pH Units	1	1710090	10/10/17	10/10/17	EPA 9045	
% Solids	86.5		%	"	1710092	10/10/17	10/11/17	% calculation	
Specific Conductance (EC)	11.8	0.0100	mmhos/cm	"	1710091	10/10/17	10/10/17	SM 2510B	

Summit Scientific

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4600 West 60th Avenue  
Arvada CO, 80003

Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

**Comp02**  
**1710070-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/06/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1510	11.6	mg/kg dry	1	1710081	10/09/17	10/09/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	171	5.81	"	"	"	"	"	"	
Sodium	2980	5.81	"	"	"	"	"	"	
Sodium Adsorption Ratio	19.4		units	"	1710120	10/11/17	10/11/17	"	

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

Date Sampled: **10/06/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	10.2	0.0100	mmhos/cm	1	1710091	10/10/17	10/10/17	SM 2510B	
% Solids	86.0		%	"	1710092	10/10/17	10/11/17	% calculation	
pH	8.71	0.100	pH Units	"	1710090	10/10/17	10/10/17	EPA 9045	

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Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

**Comp03**  
**1710070-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/06/17 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	<b>1130</b>	12.1	mg/kg dry	1	1710081	10/09/17	10/09/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	<b>194</b>	6.04	"	"	"	"	"	"	
Sodium	<b>2680</b>	6.04	"	"	"	"	"	"	
Sodium Adsorption Ratio	<b>19.4</b>		units	"	1710120	10/11/17	10/11/17	"	

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

Date Sampled: **10/06/17 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>9.09</b>	0.100	pH Units	1	1710090	10/10/17	10/10/17	EPA 9045	
Specific Conductance (EC)	<b>8.26</b>	0.0100	mmhos/cm	"	1710091	10/10/17	10/10/17	SM 2510B	
% Solids	<b>82.8</b>		%	"	1710092	10/10/17	10/11/17	% calculation	

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

Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

**Comp04**  
**1710070-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/06/17 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>2920</b>	11.7	mg/kg dry	1	1710081	10/09/17	10/09/17	EPA 6020/Mod. USDA60 6(2, 3A)	
<b>Magnesium</b>	<b>161</b>	5.84	"	"	"	"	"	"	
<b>Sodium</b>	<b>1490</b>	5.84	"	"	"	"	"	"	
<b>Sodium Adsorption Ratio</b>	<b>7.27</b>		units	"	1710120	10/11/17	10/11/17	"	

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

Date Sampled: **10/06/17 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>9.01</b>	0.100	pH Units	1	1710090	10/10/17	10/10/17	EPA 9045	
<b>% Solids</b>	<b>85.6</b>		%	"	1710092	10/10/17	10/11/17	% calculation	
<b>Specific Conductance (EC)</b>	<b>2.57</b>	0.0100	mmhos/cm	"	1710091	10/10/17	10/10/17	SM 2510B	

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Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

**Comp05**  
**1710070-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/06/17 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4120	12.9	mg/kg dry	1	1710081	10/09/17	10/09/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	332	6.44	"	"	"	"	"	"	
Sodium	5850	6.44	"	"	"	"	"	"	
Sodium Adsorption Ratio	23.6		units	"	1710120	10/11/17	10/11/17	"	

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

Date Sampled: **10/06/17 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44	0.100	pH Units	1	1710090	10/10/17	10/10/17	EPA 9045	
% Solids	77.6		%	"	1710092	10/10/17	10/11/17	% calculation	
Specific Conductance (EC)	20.2	0.0100	mmhos/cm	"	1710091	10/10/17	10/10/17	SM 2510B	

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Project: Propst #2  
Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

# Soluble Nutrients by EPA 6020/Mod. 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 1710081 - General Preparation

#### Blank (1710081-BLK1)

Prepared & Analyzed: 10/09/17

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

#### LCS (1710081-BS1)

Prepared & Analyzed: 10/09/17

Calcium	969	10.0	mg/kg wet	1000	96.9	82.9-118
Magnesium	861	5.00	"	1000	86.1	77.1-123
Sodium	876	5.00	"	1000	87.6	71-129

#### Duplicate (1710081-DUP1)

Source: 1710039-05

Prepared & Analyzed: 10/09/17

Calcium	4250	11.7	mg/kg dry	2520	51.2	200
Magnesium	296	5.87	"	416	33.5	200
Sodium	2040	5.87	"	295	150	200

#### Matrix Spike (1710081-MS1)

Source: 1710039-05

Prepared & Analyzed: 10/09/17

Calcium	3960	11.7	mg/kg dry	1170	2520	123	75-125
Magnesium	1400	5.87	"	1170	416	84.3	75-125
Sodium	1650	5.87	"	1170	295	115	75-125

#### Matrix Spike Dup (1710081-MSD1)

Source: 1710039-05

Prepared & Analyzed: 10/09/17

Calcium	3980	11.7	mg/kg dry	1170	2520	125	75-125	0.458	25
Magnesium	1440	5.87	"	1170	416	87.2	75-125	2.39	25
Sodium	1680	5.87	"	1170	295	118	75-125	1.86	25

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10/11/17 15:49

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

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

Batch 1710090 - General Preparation

LCS (1710090-BS1)

Prepared & Analyzed: 10/10/17

pH	9.18	0.100	pH Units	9.16	100	95-105
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Duplicate (1710090-DUP1)

Source: 1710033-01

Prepared & Analyzed: 10/10/17

pH	9.41	0.100	pH Units	9.34	0.747	20
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Batch 1710091 - General Preparation

Blank (1710091-BLK1)

Prepared & Analyzed: 10/10/17

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1710091-BS1)

Prepared & Analyzed: 10/10/17

Specific Conductance (EC)	0.751	0.0100	mmhos/cm	0.750	100	90-110
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Duplicate (1710091-DUP1)

Source: 1710033-01

Prepared & Analyzed: 10/10/17

Specific Conductance (EC)	4.36	0.0100	mmhos/cm	4.36	0.149	20
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Batch 1710092 - General Preparation

Duplicate (1710092-DUP1)

Source: 1710089-01

Prepared & Analyzed: 10/10/17

% Solids	90.1		%	89.6	0.556	20
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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: Propst #2

Project Number: [none]  
Project Manager: Chris Purcell

**Reported:**  
10/11/17 15:49

### 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