

Summit Scientific

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: Reiners Flowline

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: Reiners Flowline
Project Number: [none]
Project Manager: Chris Purcell

Reported:
10/11/17 15:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Comp01	1710071-01	Soil	10/06/17 11:00	10/06/17 17:50
Comp02	1710071-02	Soil	10/06/17 11:30	10/06/17 17:50

Summit Scientific

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A handwritten signature in black ink, appearing to be 'M. S. M.' or similar.

Summit Scientific

S₂

1710071

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

Page 1 of 1

Client: LTE Project Manager: Chris Purzell, Hank Raizen
Address: 4600 W. 60th Avenue E-Mail: cpurzell@itenv.com, hraizen@itenv.com
City/State/Zip: Arvada, CO 80003
Phone: (303) 433-9788 Fax: _____ Project Name: Reiners Flowline
Sampler Name: B. Finn Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	EC	PH	SAR							
1	Comp 01	10/06/2017	1100	2			X			X				X	X	X						
2	Comp 02	10/06/2017	1130	X			X			X				X	X	X						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

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

Sample Receipt Checklist

1710071

S2 Work Order: _____

Client: LTE Client Project ID: REINERS FLOWLINE

Shipped Via: A.D. ON ICE 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 ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are short holding time analytes or samples with HTs due within 48 hours present?			X	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

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

Murip.
Custodian Printed Name

10-6-17
Signature or Initials of Custodian

18:00
Date/Time



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

Project: Reiners Flowline
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Reported:
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Comp01
1710071-01 (Soil)

Summit Scientific

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

Date Sampled: **10/06/17 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	2300	12.1	mg/kg dry	1	1710089	10/10/17	10/11/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	638	6.06	"	"	"	"	"	"	
Sodium	36.3	6.06	"	"	"	"	"	"	
Sodium Adsorption Ratio	0.173		units	"	1710120	10/11/17	10/11/17	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/06/17 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.5		%	1	1710092	10/10/17	10/11/17	% calculation	
pH	8.10	0.100	pH Units	"	1710079	10/09/17	10/11/17	EPA 9045	
Specific Conductance (EC)	0.440	0.0100	mmhos/cm	"	1710078	10/09/17	10/11/17	SM 2510B	

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Project: Reiners Flowline
Project Number: [none]
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Reported:
10/11/17 15:51

Comp02
1710071-02 (Soil)

Summit Scientific

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

Date Sampled: **10/06/17 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1090	12.2	mg/kg dry	1	1710089	10/10/17	10/11/17	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	580	6.08	"	"	"	"	"	"	
Sodium	31.4	6.08	"	"	"	"	"	"	
Sodium Adsorption Ratio	0.191		units	"	1710120	10/11/17	10/11/17	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/06/17 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.2		%	1	1710092	10/10/17	10/11/17	% calculation	
pH	8.29	0.100	pH Units	"	1710079	10/09/17	10/11/17	EPA 9045	
Specific Conductance (EC)	0.463	0.0100	mmhos/cm	"	1710078	10/09/17	10/11/17	SM 2510B	

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Project: Reiners Flowline
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Reported:
10/11/17 15:51

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

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

Batch 1710089 - General Preparation

Blank (1710089-BLK1)

Prepared: 10/10/17 Analyzed: 10/11/17

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

LCS (1710089-BS1)

Prepared: 10/10/17 Analyzed: 10/11/17

Calcium	933	10.0	mg/kg wet	1000	93.3	82.9-118
Magnesium	939	5.00	"	1000	93.9	77.1-123
Sodium	973	5.00	"	1000	97.3	71-129

Duplicate (1710089-DUP1)

Source: 1710063-01

Prepared: 10/10/17 Analyzed: 10/11/17

Calcium	200	10.7	mg/kg dry	205	2.43	200
Magnesium	210	5.34	"	212	0.759	200
Sodium	5.09	5.34	"	7.62	39.9	200

Matrix Spike (1710089-MS1)

Source: 1710063-01

Prepared: 10/10/17 Analyzed: 10/11/17

Calcium	1110	10.7	mg/kg dry	1070	205	84.9	75-125
Magnesium	1190	5.34	"	1070	212	91.8	75-125
Sodium	826	5.34	"	1070	7.62	76.7	75-125

Matrix Spike Dup (1710089-MSD1)

Source: 1710063-01

Prepared: 10/10/17 Analyzed: 10/11/17

Calcium	1100	10.7	mg/kg dry	1070	205	84.2	75-125	0.673	25
Magnesium	1190	5.34	"	1070	212	91.9	75-125	0.109	25
Sodium	866	5.34	"	1070	7.62	80.4	75-125	4.72	25

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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 1710078 - General Preparation

Blank (1710078-BLK1)

Prepared: 10/09/17 Analyzed: 10/11/17

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1710078-BS1)

Prepared: 10/09/17 Analyzed: 10/11/17

Specific Conductance (EC) 0.734 0.0100 mmhos/cm 0.750 97.9 90-110

Duplicate (1710078-DUP1)

Source: 1710005-01

Prepared: 10/09/17 Analyzed: 10/11/17

Specific Conductance (EC) 3.01 0.0100 mmhos/cm 3.37 11.3 20

Batch 1710079 - General Preparation

LCS (1710079-BS1)

Prepared: 10/09/17 Analyzed: 10/11/17

pH 9.27 0.100 pH Units 9.16 101 95-105

Duplicate (1710079-DUP1)

Source: 1710005-01

Prepared: 10/09/17 Analyzed: 10/11/17

pH 8.22 0.100 pH Units 8.19 0.366 20

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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Project Number: [none]
Project Manager: Chris Purcell

Reported:
10/11/17 15:51

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