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13 August 2015

Katie Wohlust  
Red Willow Production  
PO Box 369  
Ignacio, CO 81137  
RE: ph, EC, SAR

Enclosed are the results of analyses for samples received by the laboratory on 08/10/15 09:43.  
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Debbie Zufelt".

Debbie Zufelt  
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (\*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water



Red Willow Production	Project: ph, EC, SAR	
PO Box 369	Project Name / Number: 34-10 #28-2 PL	<b>Reported:</b>
Ignacio CO, 81137	Project Manager: Katie Wohlust	08/13/15 15:45

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Origin	1508107-01	Solid	08/08/15 15:10	08/10/15 09:43
Mid	1508107-02	Solid	08/08/15 15:10	08/10/15 09:43
Terminus	1508107-03	Solid	08/08/15 15:20	08/10/15 09:43

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**Origin**

**1508107-01 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Saturated Paste Extraction**

Calcium	18.6	10.0	0.039	mg/L	10	08/13/15	EPA200.7		JGS
Conductivity	402			umhos/cm	1	08/13/15	ASA#9 10-3.3		LLG
Magnesium	<10.0	10.0	0.190	mg/L	10	08/13/15	EPA200.7		JGS
pH	7.80			pH Units	1	08/13/15	ASA#9 12-2.6		LLG
SAR	4.94			[blank]	1	08/13/15	Calculation		JGS
Sodium	89.9	20.0	0.041	mg/L	10	08/13/15	EPA200.7		JGS

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**Mid**

**1508107-02 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Saturated Paste Extraction**

<b>Calcium</b>	<b>17.3</b>	10.0	0.039	mg/L	10	08/13/15	EPA200.7		JGS
<b>Conductivity</b>	<b>326</b>			umhos/cm	1	08/13/15	ASA#9 10-3.3		LLG
<b>Magnesium</b>	<10.0	10.0	0.190	mg/L	10	08/13/15	EPA200.7		JGS
<b>pH</b>	<b>8.04</b>			pH Units	1	08/13/15	ASA#9 12-2.6		LLG
<b>SAR</b>	<b>5.59</b>			[blank]	1	08/13/15	Calculation		JGS
<b>Sodium</b>	<b>98.0</b>	20.0	0.041	mg/L	10	08/13/15	EPA200.7		JGS

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**Terminus**

**1508107-03 (Solid)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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**Saturated Paste Extraction**

<b>Calcium</b>	<b>39.9</b>	10.0	0.039	mg/L	10	08/13/15	EPA200.7		JGS
<b>Conductivity</b>	<b>456</b>			umhos/cm	1	08/13/15	ASA#9 10-3.3		LLG
<b>Magnesium</b>	<10.0	10.0	0.190	mg/L	10	08/13/15	EPA200.7		JGS
<b>pH</b>	<b>7.59</b>			pH Units	1	08/13/15	ASA#9 12-2.6		LLG
<b>SAR</b>	<b>3.10</b>			[blank]	1	08/13/15	Calculation		JGS
<b>Sodium</b>	<b>81.5</b>	20.0	0.041	mg/L	10	08/13/15	EPA200.7		JGS

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**Saturated Paste Extraction - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B508112 - General Prep - Wet Chem**

<b>Duplicate (B508112-DUP1)</b>		<b>Source: 1508105-01</b>			Prepared & Analyzed: 08/13/15					
pH	8.54		pH Units		8.59			0.584	20	

**Batch B508114 - General Prep - Wet Chem**

<b>Duplicate (B508114-DUP1)</b>		<b>Source: 1508105-01</b>			Prepared & Analyzed: 08/13/15					
Conductivity	882		umhos/cm		1060			18.6	20	

**Batch B508115 - Paste Extract**

<b>Duplicate (B508115-DUP1)</b>		<b>Source: 1508105-01</b>			Prepared: 08/12/15 Analyzed: 08/13/15					
Calcium	37.3	10.0	mg/L		30.2			20.8	20	R2
Magnesium	5.64	10.0	mg/L		3.50			46.7	20	R2
Sodium	266	20.0	mg/L		262			1.70	20	

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**Notes and Definitions**

- R2 Duplicate sample RPD exceeded the method control limit. One or more of the duplicates was less than 5X reporting limit.
- 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  
\*Results reported on as received basis unless designated as dry.
- RPD Relative Percent Difference
- LCS Laboratory Control Sample (Blank Spike)
- RL Report Limit
- MDL Method Detection Limit

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