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10 November 2022

Kyle Siesser
Cottonwood Consulting
PO Box 1653
Durango, CO 81302
RE: COGCC Table 915-1

Enclosed are the results of analyses for samples received by the laboratory on 10/26/22 14:30. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, reading 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen
Laboratory Director

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. TNI Certificate Number: T104704514-22-15

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 through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-22-15



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PO Box 1653
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Project: COGCC Table 915-1
Project Name / Number: MS #2
Project Manager: Kyle Siesser

Reported:
11/10/22 13:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
BG 1	2210229-01	Solid	10/24/22 15:30	10/26/22 14:30	
BG 2	2210229-02	Solid	10/24/22 15:45	10/26/22 14:30	

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Jeremy D Allen, Laboratory Director

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Project: COGCC Table 915-1
Project Name / Number: MS #2
Project Manager: Kyle Siesser

Reported:
11/10/22 13:11

BG 1

2210229-01 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Hexavalent Chromium	0.514	0.250	0.128	mg/kg dry	25	11/02/22 12:17	3060A/3500-Cr B		HTB
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Saturated Paste Extraction

Calcium	83.5	0.100	0.058	mg/L	1	11/08/22 12:20	EPA200.7		AES
Conductivity	434			umho/cm@25 C	1	11/04/22 12:00	ASA#9 10-3.3		AWG
Magnesium	9.75	0.100	0.065	mg/L	1	11/08/22 12:20	EPA200.7		AES
pH	7.73			pH Units	1	11/04/22 12:00	ASA#9 10-3.2		AWG
SAR	0.14			No Unit	1	11/08/22 12:20	Calculation		AES
Sodium	4.99	1.00	0.079	mg/L	1	11/08/22 12:20	EPA200.7		AES

Total Metals by ICP

Barium	189	5.00	1.10	mg/kg dry	100	11/04/22 15:54	6010B		AES
Cadmium	<5.00	5.00	2.54	mg/kg dry	100	11/04/22 15:54	6010B		AES
Chromium	16.8	5.00	1.58	mg/kg dry	100	11/04/22 15:54	6010B		AES
Copper	11.0	5.00	2.83	mg/kg dry	100	11/04/22 15:54	6010B		AES
Lead	<10.0	10.0	4.02	mg/kg dry	100	11/04/22 15:54	6010B		AES
Nickel	12.7	5.00	2.41	mg/kg dry	100	11/04/22 15:54	6010B		AES
Selenium	<20.0	20.0	5.39	mg/kg dry	100	11/04/22 15:54	6010B		AES
Silver	<1.00	1.00	0.518	mg/kg dry	100	11/04/22 15:54	6010B		AES
Zinc	45.8	10.0	2.18	mg/kg dry	100	11/04/22 15:54	6010B		AES

Total Metals by ICPMS

Arsenic	5.61	1.00	0.158	mg/kg dry	1000	11/07/22 12:05	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	11/08/22 12:41	EPA200.7		AES
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Project: COGCC Table 915-1
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Reported:
11/10/22 13:11

BG 2

2210229-02 (Soil)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Hexavalent Chromium	0.514	0.250	0.128	mg/kg dry	25	11/02/22 12:17	3060A/3500-Cr B		HTB
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Saturated Paste Extraction

Calcium	56.8	0.100	0.058	mg/L	1	11/08/22 12:22	EPA200.7		AES
Conductivity	338			umho/cm@25 C	1	11/04/22 12:00	ASA#9 10-3.3		AWG
Magnesium	7.40	0.100	0.065	mg/L	1	11/08/22 12:22	EPA200.7		AES
pH	7.74			pH Units	1	11/04/22 12:00	ASA#9 10-3.2		AWG
SAR	0.22			No Unit	1	11/08/22 12:22	Calculation		AES
Sodium	6.64	1.00	0.079	mg/L	1	11/08/22 12:22	EPA200.7		AES

Total Metals by ICP

Barium	415	5.00	1.10	mg/kg dry	100	11/04/22 16:03	6010B		AES
Cadmium	<5.00	5.00	2.54	mg/kg dry	100	11/04/22 16:03	6010B		AES
Chromium	20.1	5.00	1.58	mg/kg dry	100	11/04/22 16:03	6010B		AES
Copper	14.7	5.00	2.83	mg/kg dry	100	11/04/22 16:03	6010B		AES
Lead	11.9	10.0	4.02	mg/kg dry	100	11/04/22 16:03	6010B		AES
Nickel	17.2	5.00	2.41	mg/kg dry	100	11/04/22 16:03	6010B		AES
Selenium	<20.0	20.0	5.39	mg/kg dry	100	11/04/22 16:03	6010B		AES
Silver	<1.00	1.00	0.518	mg/kg dry	100	11/04/22 16:03	6010B		AES
Zinc	59.4	10.0	2.18	mg/kg dry	100	11/04/22 16:03	6010B		AES

Total Metals by ICPMS

Arsenic	6.91	1.00	0.158	mg/kg dry	1000	11/07/22 12:06	6020A		AES
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Hot Water Extractable

Boron	<1.20	1.20	0.568	mg/L	4	11/08/22 12:43	EPA200.7		AES
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Project: COGCC Table 915-1
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General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223040 - General Prep - Wet Chem

Blank (B223040-BLK1)

Prepared & Analyzed: 11/02/22

Hexavalent Chromium	ND	0.250	mg/kg dry							
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LCS (B223040-BS1)

Prepared & Analyzed: 11/02/22

Hexavalent Chromium	2.34	0.250	mg/kg dry	2.50		93.8	85-115			
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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 B223061 - Paste Extract

Blank (B223061-BLK1)

Prepared: 11/03/22 Analyzed: 11/08/22

Calcium	ND	0.100	mg/L							
Magnesium	ND	0.100	mg/L							
SAR	0.00		No Unit							
Sodium	ND	1.00	mg/L							

Reference (B223061-SRM1)

Prepared: 11/03/22 Analyzed: 11/08/22

SAR	11.4		No Unit	10.5		108	90-110			
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Batch B223062 - Paste Extract

Reference (B223062-SRM1)

Prepared: 11/03/22 Analyzed: 11/04/22

pH	6.99		pH Units	6.93		101	92-108			
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Batch B223063 - Paste Extract

Reference (B223063-SRM1)

Prepared: 11/03/22 Analyzed: 11/04/22

Conductivity	9060		umho/cm@25C	8340		109	90-110			
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Reported:
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Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223056 - EPA 3050

Blank (B223056-BLK1)

Prepared: 11/03/22 Analyzed: 11/04/22

Barium	ND	5.00	mg/kg dry
Cadmium	ND	5.00	mg/kg dry
Chromium	ND	5.00	mg/kg dry
Copper	ND	5.00	mg/kg dry
Lead	ND	10.0	mg/kg dry
Nickel	ND	5.00	mg/kg dry
Selenium	ND	20.0	mg/kg dry
Silver	ND	1.00	mg/kg dry
Zinc	ND	10.0	mg/kg dry

LCS (B223056-BS1)

Prepared: 11/03/22 Analyzed: 11/04/22

Barium	195	5.00	mg/kg dry	200	97.4	80-120
Cadmium	181	5.00	mg/kg dry	200	90.4	80-120
Chromium	194	5.00	mg/kg dry	200	97.2	80-120
Copper	404	5.00	mg/kg dry	400	101	80-120
Lead	187	10.0	mg/kg dry	200	93.4	80-120
Nickel	186	5.00	mg/kg dry	200	92.8	80-120
Selenium	777	20.0	mg/kg dry	800	97.1	80-120
Silver	9.38	1.00	mg/kg dry	10.0	93.8	80-120
Zinc	175	10.0	mg/kg dry	200	87.3	80-120

LCS Dup (B223056-BSD1)

Prepared: 11/03/22 Analyzed: 11/04/22

Barium	194	5.00	mg/kg dry	200	96.9	80-120	0.545	20
Cadmium	179	5.00	mg/kg dry	200	89.6	80-120	0.842	20
Chromium	193	5.00	mg/kg dry	200	96.7	80-120	0.585	20
Copper	404	5.00	mg/kg dry	400	101	80-120	0.0828	20
Lead	184	10.0	mg/kg dry	200	92.0	80-120	1.52	20
Nickel	183	5.00	mg/kg dry	200	91.6	80-120	1.31	20
Selenium	762	20.0	mg/kg dry	800	95.3	80-120	1.92	20
Silver	9.42	1.00	mg/kg dry	10.0	94.2	80-120	0.471	20
Zinc	171	10.0	mg/kg dry	200	85.3	80-120	2.26	20

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Project Manager: Kyle Siesser

Reported:
11/10/22 13:11

Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223057 - EPA 3050M

Blank (B223057-BLK1)

Prepared: 11/03/22 Analyzed: 11/07/22

Arsenic ND 1.00 mg/kg dry

LCS (B223057-BS1)

Prepared: 11/03/22 Analyzed: 11/07/22

Arsenic 4.58 1.00 mg/kg dry 5.00 91.7 80-120

LCS Dup (B223057-BSD1)

Prepared: 11/03/22 Analyzed: 11/07/22

Arsenic 4.89 1.00 mg/kg dry 5.00 97.8 80-120 6.45 20

Hot Water Extractable - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B223064 - Hot Water Soluble Metals Extract

Blank (B223064-BLK1)

Prepared: 11/03/22 Analyzed: 11/08/22

Boron ND 1.20 mg/L

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 *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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