

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

September 18, 2023

Martin Eckert III

Eagle Environmental Consulting

8000 W 44th Ave

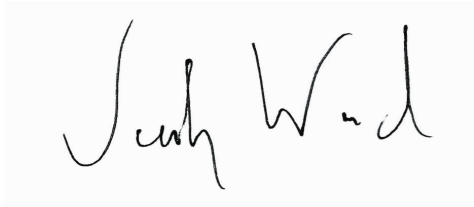
Wheat Ridge, CO 80033

RE: Civitas - Sam 25H-M166

Work Order # 2309133

Enclosed are the results of analyses for samples received by Summit Scientific on 09/08/23 18:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style. The first name "Jacob" is written with a large, looped 'J' and a small 'a'. The last name "Wood" is written with a large 'W' and a small 'd'.

Jacob Wood For Paul Shrewsbury

President



Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background01@5'	2309133-01	Soil	09/08/23 16:48	09/08/23 18:50
Background02@5'	2309133-02	Soil	09/08/23 16:52	09/08/23 18:50
Background03@5'	2309133-03	Soil	09/08/23 17:01	09/08/23 18:50
Background04@8'	2309133-04	Soil	09/08/23 17:17	09/08/23 18:50
Background05@8'	2309133-05	Soil	09/08/23 17:23	09/08/23 18:50
Background06@8'	2309133-06	Soil	09/08/23 17:46	09/08/23 18:50

Summit Scientific

*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.*

# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2309133	

Send Data To:		Send Invoice To:	
Client: Eagle Environmental Consulting	Project Manager: Martin Eckert III	Company: Civitas	
Address: 8000 W 44th Ave	E-Mail: mce30eagle-enviro.com	Project Name/Location: Sam 25H-M166	
City/State/Zip: Wheat Ridge, CO 80053		AFE#:	
Phone: 303-433-0479	Project Name: Sam 25H-M166	PO/Billing Codes:	
Sampler Name: IM/B3	Project Number:	Contact: Costin	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Boron - DPA/50:10:1	EC-9050A	SAR-203	pH-9045D	Table 915 Metals	-60203	Cr VI-7196A	
1	Background 01 @ 5'	9-8-23	11:48	2			X			X			X	X	X	X	X	X	X	EC/SAR/pH =
2	Background 02 @ 5'		11:52	1																substantiated paste prep
3	Background 03 @ 5'		17:01	1																
4	Background 04 @ 8'		17:17	1																
5	Background 05 @ 8'		17:23	1																
6	Background 06 @ 8'		17:46	1																
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>Adam W. H. H.</i>	Date/Time: 9/8/23 13:47	Received by: <i>Chris Smith</i>	Date/Time: 9/8/23 18:50	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 4.5	Corrected Temperature	IR gun #: 2	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2309133Client: Eagle Environmental Client Project ID: Sam 25H-M166Shipped Via H.D./P.U./FedEx/UPS/USPS/Other ☐ ☐ ☐ ☐ ☐ Airbill #: \_\_\_\_\_Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 4.5 Thermometer # 2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

  
 \_\_\_\_\_  
 Custodian Printed Name

9/8/23  
 \_\_\_\_\_  
 Date/Time



Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background01@5'**  
**2309133-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0692	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	1.01	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	52.0	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.0811	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.31	0.400	0.0209	"	"	"	"	"	"	
Lead	4.30	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.38	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0133	0.0200	0.00267	"	"	"	"	"	"	J
Zinc	9.95	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	67.2	0.0520		mg/L dry	1	BGI0236	09/11/23	09/12/23	EPA 6020B	
Magnesium	17.3	0.0520		"	"	"	"	"	"	
Sodium	1.95	0.0520		"	"	"	"	"	"	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background01@5'**  
**2309133-01 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0549	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.2			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.116	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 16:48**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.22			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background02@5'**  
**2309133-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.185	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	0.894	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	54.7	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.0755	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.22	0.400	0.0209	"	"	"	"	"	"	
Lead	3.87	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.38	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0152	0.0200	0.00267	"	"	"	"	"	"	J
Zinc	9.14	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	42.9	0.0513		mg/L dry	1	BGI0236	09/11/23	09/12/23	EPA 6020B	
Magnesium	11.2	0.0513		"	"	"	"	"	"	
Sodium	1.78	0.0513		"	"	"	"	"	"	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**

09/18/23 10:26

**Background02@5'**  
**2309133-02 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0626	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.4			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.118	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 16:52**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.21			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background03@5'**  
**2309133-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.142	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	1.08	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	55.2	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.0850	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.48	0.400	0.0209	"	"	"	"	"	"	
Lead	4.99	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.66	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0222	0.0200	0.00267	"	"	"	"	"	"	
Zinc	10.4	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	24.8	0.0514		mg/L dry	1	BGI0236	09/11/23	09/12/23	EPA 6020B	
Magnesium	6.90	0.0514		"	"	"	"	"	"	
Sodium	2.12	0.0514		"	"	"	"	"	"	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background03@5'**  
**2309133-03 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Sodium Adsorption Ratio	0.0971	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	97.4			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.153	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:01**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.29			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background04@8'**  
**2309133-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0996	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	1.43	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	51.0	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.119	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.56	0.400	0.0209	"	"	"	"	"	"	
Lead	5.95	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.89	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0195	0.0200	0.00267	"	"	"	"	"	"	J
Zinc	12.5	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	29.8	0.0518		mg/L dry	1	BGI0236	09/11/23	09/12/23	EPA 6020B	
Magnesium	6.79	0.0518		"	"	"	"	"	"	
Sodium	11.4	0.0518		"	"	"	"	"	"	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background04@8'**  
**2309133-04 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Sodium Adsorption Ratio	<b>0.490</b>	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	<b>96.5</b>			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	<b>0.244</b>	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	<b>7.41</b>			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

Summit Scientific

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background05@8'**  
**2309133-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0987	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	1.21	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	45.7	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.0919	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.36	0.400	0.0209	"	"	"	"	"	"	
Lead	4.97	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.80	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0154	0.0200	0.00267	"	"	"	"	"	"	J
Zinc	10.8	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	25.3	0.0520		mg/L dry	1	BGI0236	09/11/23	09/12/23	EPA 6020B	
Magnesium	6.91	0.0520		"	"	"	"	"	"	
Sodium	12.8	0.0520		"	"	"	"	"	"	

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background05@8'**  
**2309133-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Sodium Adsorption Ratio	0.582	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	96.2			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.224	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:23**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.34			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background06@8'**  
**2309133-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Boron	0.0951	0.0100	0.00690	mg/L	1	BGI0225	09/11/23	09/11/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Arsenic	1.20	0.200	0.168	mg/kg dry	1	BGI0231	09/11/23	09/13/23	EPA 6020B	
Barium	51.9	0.400	0.316	"	"	"	"	"	"	
Cadmium	0.0803	0.200	0.00720	"	"	"	"	"	"	J
Copper	2.41	0.400	0.0209	"	"	"	"	"	"	
Lead	4.84	0.200	0.0550	"	"	"	"	"	"	
Nickel	2.79	0.400	0.0610	"	"	"	"	"	"	
Silver	0.0175	0.0200	0.00267	"	"	"	"	"	"	J
Zinc	11.6	0.400	0.266	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30	0.040	mg/kg dry	1	BGI0245	09/11/23	09/11/23	EPA 7196A	

**Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Calcium	30.8	0.0520		mg/L dry	1	BGI0236	09/11/23	09/13/23	EPA 6020B	
Magnesium	8.92	0.0520		"	"	"	"	"	"	
Sodium	10.4	0.0520		"	"	"	"	"	"	

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Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Background06@8'**  
**2309133-06 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Sodium Adsorption Ratio	0.425	0.00100		units	1	BGI0380	09/13/23	09/13/23	Calculation	

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

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	96.2			%	1	BGI0229	09/11/23	09/11/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.160	0.0100	0.00100	mmhos/cm	1	BGI0287	09/12/23	09/12/23	EPA 120.1	

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction**

Date Sampled: **09/08/23 17:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	7.52			pH Units	1	BGI0288	09/12/23	09/12/23	EPA 9045D	

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

### Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control

#### Summit Scientific

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

#### Batch BGI0225 - EPA 3050B

##### Blank (BGI0225-BLK1)

Prepared & Analyzed: 09/11/23

Boron	ND	0.0100	mg/L
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##### LCS (BGI0225-BS1)

Prepared & Analyzed: 09/11/23

Boron	5.93	0.0100	mg/L	5.00	119	80-120
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##### Duplicate (BGI0225-DUP1)

Source: 2309117-01

Prepared & Analyzed: 09/11/23

Boron	0.0740	0.0100	mg/L	0.113	42.0	20	QR-01
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##### Matrix Spike (BGI0225-MS1)

Source: 2309117-01

Prepared & Analyzed: 09/11/23

Boron	5.96	0.0100	mg/L	5.00	0.113	117	75-125
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##### Matrix Spike Dup (BGI0225-MSD1)

Source: 2309117-01

Prepared & Analyzed: 09/11/23

Boron	6.41	0.0100	mg/L	5.00	0.113	126	75-125	7.21	25	QM-07
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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGI0231 - EPA 3050B**

**Blank (BGI0231-BLK1)**

Prepared: 09/11/23 Analyzed: 09/12/23

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

**LCS (BGI0231-BS1)**

Prepared: 09/11/23 Analyzed: 09/12/23

Arsenic	40.0	0.200	mg/kg wet	40.0	100	80-120
Barium	40.4	0.400	"	40.0	101	80-120
Cadmium	2.39	0.200	"	2.00	119	80-120
Copper	45.8	0.400	"	40.0	115	80-120
Lead	23.9	0.200	"	20.0	120	80-120
Nickel	45.9	0.400	"	40.0	115	80-120
Silver	2.30	0.0200	"	2.00	115	80-120
Zinc	45.2	0.400	"	40.0	113	80-120

**Duplicate (BGI0231-DUP1)**

Source: 2309117-01

Prepared: 09/11/23 Analyzed: 09/12/23

Arsenic	3.64	0.200	mg/kg dry	4.02	9.95	20	
Barium	111	0.400	"	119	7.57	20	
Cadmium	0.183	0.200	"	0.185	0.757	20	J
Copper	5.37	0.400	"	5.43	1.18	20	
Lead	8.31	0.200	"	8.95	7.51	20	
Nickel	6.48	0.400	"	6.84	5.27	20	
Silver	0.0297	0.0200	"	0.0288	3.17	20	
Zinc	25.1	0.400	"	33.1	27.6	20	QR-04
Selenium	ND	0.260	"	ND		200	

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGI0231 - EPA 3050B**

Matrix Spike (BGI0231-MS1)		Source: 2309117-01			Prepared: 09/11/23 Analyzed: 09/12/23					
Arsenic	46.2	0.200	mg/kg dry	46.4	4.02	91.0	75-125			
Barium	165	0.400	"	46.4	119	97.6	75-125			
Cadmium	2.74	0.200	"	2.32	0.185	110	75-125			
Copper	32.1	0.400	"	46.4	5.43	57.5	75-125			QM-07
Lead	33.3	0.200	"	23.2	8.95	105	75-125			
Nickel	33.6	0.400	"	46.4	6.84	57.7	75-125			QM-07
Silver	2.43	0.0200	"	2.32	0.0288	103	75-125			
Zinc	52.8	0.400	"	46.4	33.1	42.4	75-125			QM-07

Matrix Spike Dup (BGI0231-MSD1)		Source: 2309117-01			Prepared: 09/11/23 Analyzed: 09/13/23					
Arsenic	33.3	0.200	mg/kg dry	46.4	4.02	63.2	75-125	32.4	25	QM-07
Barium	145	0.400	"	46.4	119	55.6	75-125	12.6	25	QM-07
Cadmium	2.01	0.200	"	2.32	0.185	78.5	75-125	31.1	25	QM-07
Copper	24.2	0.400	"	46.4	5.43	40.5	75-125	28.0	25	QM-07
Lead	25.4	0.200	"	23.2	8.95	70.8	75-125	27.1	25	QM-07
Nickel	25.6	0.400	"	46.4	6.84	40.6	75-125	26.9	25	QM-07
Silver	1.72	0.0200	"	2.32	0.0288	72.8	75-125	34.2	25	QM-07
Zinc	43.9	0.400	"	46.4	33.1	23.3	75-125	18.3	25	QM-07

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGI0245 - 3060A Mod**

**Blank (BGI0245-BLK1)**

Prepared & Analyzed: 09/11/23

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BGI0245-BS1)**

Prepared & Analyzed: 09/11/23

Chromium, Hexavalent 26.2 0.30 mg/kg wet 25.0 105 80-120

**Duplicate (BGI0245-DUP1)**

**Source: 2309125-01**

Prepared & Analyzed: 09/11/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BGI0245-MS1)**

**Source: 2309125-01**

Prepared & Analyzed: 09/11/23

Chromium, Hexavalent 35.8 0.30 mg/kg dry 35.0 ND 102 75-125

**Matrix Spike Dup (BGI0245-MSD1)**

**Source: 2309125-01**

Prepared & Analyzed: 09/11/23

Chromium, Hexavalent 35.2 0.30 mg/kg dry 35.0 ND 101 75-125 1.77 20

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**

09/18/23 10:26

## Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

### Summit Scientific

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

#### Batch BGI0236 - General Preparation

##### Blank (BGI0236-BLK1)

Prepared: 09/11/23 Analyzed: 09/12/23

Calcium	0.00816	0.0500	mg/L wet							J
Magnesium	0.00518	0.0500	"							J
Sodium	0.0294	0.0500	"							J

##### LCS (BGI0236-BS1)

Prepared: 09/11/23 Analyzed: 09/12/23

Calcium	4.93	0.0500	mg/L wet	5.00	98.7	70-130
Magnesium	5.26	0.0500	"	5.00	105	70-130
Sodium	5.38	0.0500	"	5.00	108	70-130

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8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**

09/18/23 10:26

### 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 BGI0229 - General Preparation

**Duplicate (BGI0229-DUP1)**

**Source: 2309117-01**

Prepared & Analyzed: 09/11/23

% Solids	86.2	%	86.2	0.00792	20
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8000 W 44th Ave  
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Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**

09/18/23 10:26

### Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

#### Summit Scientific

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

#### Batch BGI0287 - General Preparation

##### Blank (BGI0287-BLK1)

Prepared & Analyzed: 09/12/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

##### LCS (BGI0287-BS1)

Prepared & Analyzed: 09/12/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

##### Duplicate (BGI0287-DUP1)

Source: 2309117-01

Prepared & Analyzed: 09/12/23

Specific Conductance (EC) 0.124 0.0100 mmhos/cm 0.124 0.00 20

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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]

Project Manager: Martin Eckert III

**Reported:**

09/18/23 10:26

**Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control**

**Summit Scientific**

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

**Batch BGI0288 - General Preparation**

**LCS (BGI0288-BS1)**

Prepared & Analyzed: 09/12/23

pH	9.19	pH Units	9.18	100	95-105
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**Duplicate (BGI0288-DUP1)**

Source: 2309117-01

Prepared & Analyzed: 09/12/23

pH	8.37	pH Units	8.02	4.27	20
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Eagle Environmental Consulting  
8000 W 44th Ave  
Wheat Ridge CO, 80033

Project: Civitas - Sam 25H-M166

Project Number: [none]  
Project Manager: Martin Eckert III

**Reported:**  
09/18/23 10:26

### Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration
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