

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 09, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Spike State CC (BKG)

Work Order #2407023

Enclosed are the results of analyses for samples received by Summit Scientific on 07/02/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01 - 4FT	2407023-01	Soil	07/02/24 00:00	07/02/24 16:30
BKG01 - 5FT	2407023-02	Soil	07/02/24 00:00	07/02/24 16:30
BKG02 - 4FT	2407023-03	Soil	07/02/24 00:00	07/02/24 16:30
BKG02 - 5FT	2407023-04	Soil	07/02/24 00:00	07/02/24 16:30
BKG03 - 4FT	2407023-05	Soil	07/02/24 00:00	07/02/24 16:30
BKG03 - 5FT	2407023-06	Soil	07/02/24 00:00	07/02/24 16:30
BKG04 - 4FT	2407023-07	Soil	07/02/24 00:00	07/02/24 16:30
BKG04 - 5FT	2407023-08	Soil	07/02/24 00:00	07/02/24 16:30
BKG05 - 4FT	2407023-09	Soil	07/02/24 00:00	07/02/24 16:30
BKG05 - 5FT	2407023-10	Soil	07/02/24 00:00	07/02/24 16:30

Summit Scientific

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Client: Fremont Environmental		Send Data To:		Send Invoice To:	
Address:		Project Manager: Paul Henehan		Company: Noble	
City/State/Zip:		E-Mail: Fremont Distribution List		Project Name/Location:	
Phone: 303-261-6246		Project Name: Spike State CC (BKG)		AFE#:	
Sampler Name: Stanley Gilbert		Project Number: C023-156		PO/Billing Codes:	
				Contact: Dan Peterson	

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD		
1	BKG01-4Ft	7/2/24		1			X			X						X	X				
2	BKG01-5Ft																				
3	BKG02-4Ft																				
4	BKG02-5Ft																				
5	BKG03-4Ft																				
6	BKG03-5Ft																				
7	BKG04-4Ft																				
8	BKG04-5Ft																				
9	BKG05-4Ft																				
10	BKG05-5Ft																				
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	TAT Business Days	Field DO	Notes:
	7/2/24 15:50	Summit North	7/2/24 15:50	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
	7/2/24 16:30		7/2/24 16:30	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.6	Corrected Temperature: 9	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2407023Client: FremontClient Project ID: Spike State CC (BKG)Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐

Airbill #: _____

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

9.6

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: 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? ⁽¹⁾	<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 ²⁺), Hexavalent Chromium (Cr ⁶⁺ , 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? ⁽¹⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no sample times
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<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)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ 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):

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

Custodian Printed Name

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG01 - 4FT
2407023-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.25	0.200		mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	35.6	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	2.64	0.400		"	"	"	"	"	"	
Lead	3.02	0.200		"	"	"	"	"	"	
Nickel	2.68	0.400		"	"	"	"	"	"	
Silver	0.0216	0.0200		"	"	"	"	"	"	
Zinc	11.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	71.5	0.0500		mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	16.1	0.0500		"	"	"	"	"	"	
Sodium	0.754	0.0500		"	"	"	"	"	"	

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Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG01 - 4FT
2407023-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0210	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.67		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG01 - 5FT
2407023-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.32	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	36.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.91	0.400	"	"	"	"	"	"	
Lead	3.41	0.200	"	"	"	"	"	"	
Nickel	3.09	0.400	"	"	"	"	"	"	
Silver	0.0337	0.0200	"	"	"	"	"	"	
Zinc	12.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	64.0	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	14.8	0.0500	"	"	"	"	"	"	
Sodium	0.743	0.0500	"	"	"	"	"	"	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG01 - 5FT
2407023-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0218	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.3		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.133	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.37		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG02 - 4FT
2407023-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.42	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	36.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.68	0.400	"	"	"	"	"	"	
Lead	3.31	0.200	"	"	"	"	"	"	
Nickel	2.78	0.400	"	"	"	"	"	"	
Silver	0.0297	0.0200	"	"	"	"	"	"	
Zinc	11.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	62.1	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	14.1	0.0500	"	"	"	"	"	"	
Sodium	0.764	0.0500	"	"	"	"	"	"	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG02 - 4FT
2407023-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0228	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.0		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0742	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.76		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG02 - 5FT
2407023-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.38	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	35.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.71	0.400	"	"	"	"	"	"	
Lead	3.25	0.200	"	"	"	"	"	"	
Nickel	2.81	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	66.3	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	15.9	0.0500	"	"	"	"	"	"	
Sodium	0.840	0.0500	"	"	"	"	"	"	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG02 - 5FT
2407023-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0240	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0845	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.56		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG03 - 4FT
2407023-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.33	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	42.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.77	0.400	"	"	"	"	"	"	
Lead	4.13	0.200	"	"	"	"	"	"	
Nickel	2.87	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	76.3	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	18.1	0.0500	"	"	"	"	"	"	
Sodium	0.740	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG03 - 4FT
2407023-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0198	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.1		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0905	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.01		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG03 - 5FT
2407023-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.54	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	42.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.20	0.400	"	"	"	"	"	"	
Lead	3.82	0.200	"	"	"	"	"	"	
Nickel	3.16	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	89.8	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	21.3	0.0500	"	"	"	"	"	"	
Sodium	1.13	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG03 - 5FT
2407023-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0278	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0338	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.02		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG04 - 4FT
2407023-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.37	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	44.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.89	0.400	"	"	"	"	"	"	
Lead	3.48	0.200	"	"	"	"	"	"	
Nickel	3.20	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	13.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	72.5	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	15.8	0.0500	"	"	"	"	"	"	
Sodium	0.741	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG04 - 4FT
2407023-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0206	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.4		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0172	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.32		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG04 - 5FT
2407023-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.21	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	39.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.28	0.400	"	"	"	"	"	"	
Lead	3.45	0.200	"	"	"	"	"	"	
Nickel	2.87	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	43.9	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	9.24	0.0500	"	"	"	"	"	"	
Sodium	0.728	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG04 - 5FT
2407023-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0261	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.5		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.118	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.07		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG05 - 4FT
2407023-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.03	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	57.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.98	0.400	"	"	"	"	"	"	
Lead	5.15	0.200	"	"	"	"	"	"	
Nickel	5.40	0.400	"	"	"	"	"	"	
Silver	0.0208	0.0200	"	"	"	"	"	"	
Zinc	23.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	149	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	34.7	0.0500	"	"	"	"	"	"	
Sodium	0.826	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG05 - 4FT
2407023-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0158	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.119	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG05 - 5FT
2407023-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHG0111	07/03/24	07/04/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.01	0.200	mg/kg dry	1	BHG0092	07/03/24	07/04/24	EPA 6020B	
Barium	63.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.48	0.400	"	"	"	"	"	"	
Lead	5.45	0.200	"	"	"	"	"	"	
Nickel	5.98	0.400	"	"	"	"	"	"	
Silver	0.0314	0.0200	"	"	"	"	"	"	
Zinc	25.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0107	07/03/24	07/03/24	EPA 7196A	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	172	0.0500	mg/L dry	1	BHG0089	07/02/24	07/04/24	EPA 6020B	
Magnesium	35.2	0.0500	"	"	"	"	"	"	
Sodium	0.910	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

BKG05 - 5FT
2407023-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0165	0.00100	units	1	BHG0192	07/08/24	07/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.7		%	1	BHG0115	07/03/24	07/08/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.224	0.0100	mmhos/cm	1	BHG0091	07/02/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/02/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BHG0090	07/02/24	07/08/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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 BHG0111 - EPA 3050B

Blank (BHG0111-BLK1)

Prepared: 07/03/24 Analyzed: 07/04/24

Boron	ND	2.00	mg/L
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LCS (BHG0111-BS1)

Prepared: 07/03/24 Analyzed: 07/04/24

Boron	5.02	2.00	mg/L	5.00	100	80-120
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Duplicate (BHG0111-DUP1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/04/24

Boron	0.0649	2.00	mg/L	0.107	48.6	20	QR-01
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Matrix Spike (BHG0111-MS1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/04/24

Boron	5.13	2.00	mg/L	4.98	0.107	101	75-125
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Matrix Spike Dup (BHG0111-MSD1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/04/24

Boron	5.57	2.00	mg/L	4.98	0.107	110	75-125	8.34	25
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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 BHG0092 - EPA 3050B

Blank (BHG0092-BLK1)

Prepared: 07/03/24 Analyzed: 07/04/24

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 (BHG0092-BS1)

Prepared: 07/03/24 Analyzed: 07/04/24

Arsenic	38.9	0.200	mg/kg wet	40.0	97.3	80-120
Barium	39.7	0.400	"	40.0	99.1	80-120
Cadmium	1.90	0.200	"	2.00	95.2	80-120
Copper	39.0	0.400	"	40.0	97.4	80-120
Lead	19.1	0.200	"	20.0	95.5	80-120
Nickel	38.6	0.400	"	40.0	96.5	80-120
Silver	1.91	0.0200	"	2.00	95.4	80-120
Zinc	38.5	0.400	"	40.0	96.4	80-120
Selenium	4.48	0.260	"	4.00	112	80-120

Duplicate (BHG0092-DUP1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/09/24

Arsenic	1.24	0.200	mg/kg dry	1.15	7.39	20	
Barium	30.2	0.400	"	38.7	24.5	20	QR-04
Cadmium	0.0867	0.200	"	0.0759	13.3	20	
Copper	4.99	0.400	"	4.61	8.04	20	
Lead	2.74	0.200	"	2.40	13.3	20	
Nickel	4.06	0.400	"	3.75	7.93	20	
Silver	0.00945	0.0200	"	0.0171	57.7	20	QR-01
Zinc	14.1	0.400	"	13.7	3.18	20	
Selenium	ND	0.260	"	ND		20	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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 BHG0092 - EPA 3050B

Matrix Spike (BHG0092-MS1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/09/24

Arsenic	31.0	0.200	mg/kg dry	41.1	1.15	72.7	75-125			QM-07
Barium	78.0	0.400	"	41.1	38.7	95.8	75-125			
Cadmium	2.14	0.200	"	2.05	0.0759	100	75-125			
Copper	44.7	0.400	"	41.1	4.61	97.5	75-125			
Lead	22.4	0.200	"	20.5	2.40	97.3	75-125			
Nickel	44.3	0.400	"	41.1	3.75	98.6	75-125			
Silver	1.99	0.0200	"	2.05	0.0171	96.2	75-125			
Zinc	54.2	0.400	"	41.1	13.7	98.7	75-125			
Selenium	3.53	0.260	"	4.11	ND	86.0	75-125			

Matrix Spike Dup (BHG0092-MSD1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/09/24

Arsenic	30.1	0.200	mg/kg dry	41.1	1.15	70.6	75-125	2.87	25	QM-07
Barium	92.7	0.400	"	41.1	38.7	132	75-125	17.3	25	QM-05
Cadmium	2.17	0.200	"	2.05	0.0759	102	75-125	1.36	25	
Copper	45.6	0.400	"	41.1	4.61	99.7	75-125	1.96	25	
Lead	23.0	0.200	"	20.5	2.40	100	75-125	2.89	25	
Nickel	44.9	0.400	"	41.1	3.75	100	75-125	1.35	25	
Silver	2.02	0.0200	"	2.05	0.0171	97.3	75-125	1.09	25	
Zinc	56.1	0.400	"	41.1	13.7	103	75-125	3.38	25	
Selenium	3.52	0.260	"	4.11	ND	85.7	75-125	0.338	25	

Post Spike (BHG0092-PS1)

Source: 2407020-01

Prepared: 07/03/24 Analyzed: 07/04/24

Arsenic	110		ug/l	100	2.80	107	75-125			
Barium	168		"	100	94.1	74.3	75-125			QM-01
Cadmium	5.13		"	5.00	0.185	99.0	75-125			
Copper	114		"	100	11.2	103	75-125			
Lead	54.5		"	50.0	5.85	97.3	75-125			
Nickel	112		"	100	9.14	102	75-125			
Silver	4.98		"	5.00	0.0417	98.7	75-125			
Zinc	136		"	100	33.3	102	75-125			
Selenium	10.9		"	10.0	0.0540	108	75-125			

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Project: Noble - Spike State CC (BKG)
Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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 BHG0107 - 3060A Mod

Blank (BHG0107-BLK1)

Prepared & Analyzed: 07/03/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0107-BS1)

Prepared & Analyzed: 07/03/24

Chromium, Hexavalent 25.9 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BHG0107-DUP1)

Source: 2407020-01

Prepared & Analyzed: 07/03/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0107-MS1)

Source: 2407020-01

Prepared & Analyzed: 07/03/24

Chromium, Hexavalent 26.9 0.30 mg/kg dry 25.7 ND 105 75-125

Matrix Spike Dup (BHG0107-MSD1)

Source: 2407020-01

Prepared & Analyzed: 07/03/24

Chromium, Hexavalent 26.0 0.30 mg/kg dry 25.7 ND 101 75-125 3.50 20

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Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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 BHG0089 - General Preparation

Blank (BHG0089-BLK1)

Prepared: 07/02/24 Analyzed: 07/03/24

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BHG0089-BS1)

Prepared: 07/02/24 Analyzed: 07/03/24

Calcium	5.48	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.38	0.0500	"	5.00	108	70-130
Sodium	5.50	0.0500	"	5.00	110	70-130

Summit Scientific

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Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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

Summit Scientific

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

Batch BHG0115 - General Preparation

Duplicate (BHG0115-DUP1)		Source: 2407023-01		Prepared: 07/03/24 Analyzed: 07/08/24	
% Solids	96.1		%	95.6	0.515 20

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Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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

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

Batch BHG0091 - General Preparation

Blank (BHG0091-BLK1)

Prepared: 07/02/24 Analyzed: 07/08/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0091-BS1)

Prepared: 07/02/24 Analyzed: 07/08/24

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHG0091-DUP1)

Source: 2407020-01

Prepared: 07/02/24 Analyzed: 07/08/24

Specific Conductance (EC) 0.243 0.0100 mmhos/cm 0.247 1.84 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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

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

Batch BHG0090 - General Preparation

LCS (BHG0090-BS1)

Prepared: 07/02/24 Analyzed: 07/08/24

pH	9.16	pH Units	9.18	99.8	95-105
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Duplicate (BHG0090-DUP1)

Source: 2407020-01

Prepared: 07/02/24 Analyzed: 07/08/24

pH	8.82	pH Units	8.85	0.340	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC (BKG)

Project Number: CO23-156
Project Manager: Paul Henchan

Reported:
07/09/24 13:53

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.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
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