

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 29, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Rouse (BKG)
Work Order #2404171

Enclosed are the results of analyses for samples received by Summit Scientific on 04/10/24 08:00. 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 written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01 0.5'	2404171-01	Soil	04/08/24 12:05	04/10/24 08:00
BKG01 3'	2404171-02	Soil	04/08/24 12:10	04/10/24 08:00
BKG01 5'	2404171-03	Soil	04/08/24 12:15	04/10/24 08:00
BKG02 0.5'	2404171-04	Soil	04/08/24 12:20	04/10/24 08:00
BKG02 3'	2404171-05	Soil	04/08/24 12:25	04/10/24 08:00
BKG02 5'	2404171-06	Soil	04/08/24 12:30	04/10/24 08:00
BKG03 0.5'	2404171-07	Soil	04/08/24 12:35	04/10/24 08:00
BKG03 3'	2404171-08	Soil	04/08/24 12:40	04/10/24 08:00
BKG03 5'	2404171-09	Soil	04/08/24 12:45	04/10/24 08:00
BKG04 0.5'	2404171-10	Soil	04/09/24 16:00	04/10/24 08:00
BKG04 3'	2404171-11	Soil	04/09/24 15:55	04/10/24 08:00
BKG04 5'	2404171-12	Soil	04/09/24 15:50	04/10/24 08:00
BKG05 0.5'	2404171-13	Soil	04/09/24 15:45	04/10/24 08:00
BKG05 3'	2404171-14	Soil	04/09/24 15:40	04/10/24 08:00
BKG05 5'	2404171-15	Soil	04/09/24 15:35	04/10/24 08:00
BKG06 0.5'	2404171-16	Soil	04/09/24 15:30	04/10/24 08:00
BKG06 3'	2404171-17	Soil	04/09/24 15:25	04/10/24 08:00
BKG06 5'	2404171-18	Soil	04/09/24 15:20	04/10/24 08:00
BKG07 0.5'	2404171-19	Soil	04/09/24 15:15	04/10/24 08:00
BKG07 3'	2404171-20	Soil	04/09/24 15:10	04/10/24 08:00
BKG07 5'	2404171-21	Soil	04/09/24 15:05	04/10/24 08:00
BKG08 0.5'	2404171-22	Soil	04/09/24 15:00	04/10/24 08:00
BKG08 3'	2404171-23	Soil	04/09/24 14:55	04/10/24 08:00
BKG08 5'	2404171-24	Soil	04/09/24 14:50	04/10/24 08:00
BKG09 0.5'	2404171-25	Soil	04/09/24 14:45	04/10/24 08:00
BKG09 3'	2404171-26	Soil	04/09/24 14:40	04/10/24 08:00
BKG09 5'	2404171-27	Soil	04/09/24 14:35	04/10/24 08:00

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45



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

Lab ID
2404171-1
Page 1 of 2

Send Data To:		Send Invoice To:	
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble	
Address:	E-Mail: Fremont Distribution List	Project Name/Location:	
City/State/Zip:		AFE#:	
Phone: 303-261-6246	Project Name: house (BK6)	PO/Billing Codes: JWRWE-A3657-ABN	
Sampler Name: Stanley Gilbert	Project Number:	Contact: Mike Montoya	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate	
1	BK601 0.5'	4/8/24	12:05	1			X			X					X	X			
2	BK601 3'		12:10	1			X			X					X	X			
3	BK601 5'		12:15	1			X			X					X	X			
4	BK602 0.5'		12:20	1			X			X					X	X			
5	BK602 3'		12:25	1			X			X					X	X			
6	BK602 5'		12:30	1			X			X					X	X			
7	BK603 0.5'		12:35	1			X			X					X	X			
8	BK603 3'		12:40	1			X			X					X	X			
9	BK603 5'		12:45	1			X			X					X	X			
10	BK604 0.5'	4/9/24	16:00	1			X			X					X	X			
11	BK604 3'		15:55	1			X			X					X	X			
12	BK604 5'		15:50	1			X			X					X	X			
13	BK605 0.5'		15:45	1			X			X					X	X			
14	BK605 3'		15:40	1			X			X					X	X			
15	BK605 5'		15:35	1			X			X					X	X			

Relinquished by:	Date/Time: 4/9/24 17:30	Received by: Summit North	Date/Time: 4/9/24 17:30	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by:	Date/Time: 4/10/24 0800	Received by:	Date/Time: 4/10/24 0800	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 7.0	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			



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

Lab ID
2404171.2
Page 2 of 2

		Send Data To:	Send Invoice To:
Client: Fremont Environmental		Project Manager: Paul Henehan	Company: <u>Noble</u>
Address:		E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip:			AFE#:
Phone: 303-261-6246		Project Name: <u>Bowsc (BK6)</u>	PO/Billing Codes: <u>WWRWE-A3657-ABN</u>
Sampler Name: Stanley Gilbert		Project Number:	Contact: <u>Mike Montoya</u>

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron		Metals (915)
1	BK606 0.5'	4/9/24	15:30	1			X			X					X	X		
2	BK606 3'		15:25	1			X			X					X	X		
3	BK606 5'		15:20	1			X			X					X	X		
4	BK607 0.5'		15:15	1			X			X					X	X		
5	BK607 3'		15:10	1			X			X					X	X		
6	BK607 5'		15:05	1			X			X					X	X		
7	BK608 0.5'		15:00	1			X			X					X	X		
8	BK608 3'		14:55	1			X			X					X	X		
9	BK608 5'		14:50	1			X			X					X	X		
10	BK609 0.5'		14:45	1			X			X					X	X		
11	BK609 3'		14:40	1			X			X					X	X		
12	BK609 5'		14:35	1			X			X					X	X		
13																		
14																		
15																		

Relinquished by: <u>[Signature]</u>	Date/Time: 4/9/24 17:30	Received by: <u>Summit North</u>	Date/Time: 4/9/24 17:30	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>[Signature]</u>	Date/Time: 4/9/24 0800	Received by: <u>[Signature]</u>	Date/Time: 4/9/24 0900	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 7.0	Corrected Temperature: 8	IR gun #:	1	HNO3 lot #:		

S₂

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S2 Work Order# 2404171

Sample Receipt Checklist

Client: Fremont

Client Project ID: Pause (BKG)

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	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"/>	<u>auzce</u>
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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 type="checkbox"/>	<input type="checkbox"/>	
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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>no sample times</u>
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.

AB
Custodian Printed Name

4/10/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 0.5'
2404171-01 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.54	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	72.5	0.400		"	"	"	"	"	"	
Cadmium	0.225	0.200		"	"	"	"	"	"	
Copper	7.04	0.400		"	"	"	"	"	"	
Lead	7.10	0.200		"	"	"	"	"	"	
Nickel	7.99	0.400		"	"	"	"	"	"	
Silver	0.0527	0.0200		"	"	"	"	"	"	
Zinc	27.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	59.5	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	14.5	0.0500		"	"	"	"	"	"	
Sodium	2.04	0.0500		"	"	"	"	"	"	

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 0.5'
2404171-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0615	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.1		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0445	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 3'
2404171-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.26	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	61.1	0.400		"	"	"	"	"	"	
Cadmium	0.207	0.200		"	"	"	"	"	"	
Copper	6.00	0.400		"	"	"	"	"	"	
Lead	6.35	0.200		"	"	"	"	"	"	
Nickel	7.24	0.400		"	"	"	"	"	"	
Silver	0.0408	0.0200		"	"	"	"	"	"	
Zinc	24.0	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	45.8	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	12.3	0.0500		"	"	"	"	"	"	
Sodium	2.02	0.0500		"	"	"	"	"	"	

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 3'
2404171-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0684	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.0		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0471	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 5'
2404171-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.48	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	59.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.42	0.400	"	"	"	"	"	"	
Lead	4.44	0.200	"	"	"	"	"	"	
Nickel	5.62	0.400	"	"	"	"	"	"	
Silver	0.0304	0.0200	"	"	"	"	"	"	
Zinc	18.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	45.0	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	48.2	0.0500	"	"	"	"	"	"	
Sodium	214	0.0500	"	"	"	"	"	"	

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG01 5'
2404171-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.28	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.46	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.81		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG02 0.5'
2404171-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.05	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	66.0	0.400		"	"	"	"	"	"	
Cadmium	0.254	0.200		"	"	"	"	"	"	
Copper	7.98	0.400		"	"	"	"	"	"	
Lead	8.78	0.200		"	"	"	"	"	"	
Nickel	7.65	0.400		"	"	"	"	"	"	
Silver	0.0430	0.0200		"	"	"	"	"	"	
Zinc	32.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	32.1	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	10.4	0.0500		"	"	"	"	"	"	
Sodium	4.68	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG02 0.5'
2404171-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.184	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.1		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.145	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG02 3'
2404171-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.30	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	34.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.08	0.400	"	"	"	"	"	"	
Lead	3.78	0.200	"	"	"	"	"	"	
Nickel	3.95	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	24.8	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	6.20	0.0500	"	"	"	"	"	"	
Sodium	72.7	0.0500	"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG02 3'
2404171-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.38	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.0		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.492	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.11		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG02 5'
2404171-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.36	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	37.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.74	0.400	"	"	"	"	"	"	
Lead	4.35	0.200	"	"	"	"	"	"	
Nickel	4.73	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	17.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	15.9	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	12.8	0.0500	"	"	"	"	"	"	
Sodium	117	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG02 5'
2404171-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.30	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.762	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.19		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN

Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG03 0.5'
2404171-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.48	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	69.1	0.400		"	"	"	"	"	"	
Cadmium	0.290	0.200		"	"	"	"	"	"	
Copper	9.95	0.400		"	"	"	"	"	"	
Lead	9.31	0.200		"	"	"	"	"	"	
Nickel	7.35	0.400		"	"	"	"	"	"	
Silver	0.0417	0.0200		"	"	"	"	"	"	
Zinc	40.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	50.0	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	15.9	0.0500		"	"	"	"	"	"	
Sodium	17.2	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG03 0.5'
2404171-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.543	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.5		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.312	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG03 3'
2404171-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.96	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	88.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.22	0.400	"	"	"	"	"	"	
Lead	4.95	0.200	"	"	"	"	"	"	
Nickel	5.17	0.400	"	"	"	"	"	"	
Silver	0.0282	0.0200	"	"	"	"	"	"	
Zinc	17.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	56.4	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	18.8	0.0500	"	"	"	"	"	"	
Sodium	85.1	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG03 3'
2404171-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.51	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.6		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.820	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.64		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG03 5'
2404171-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	9.48	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	64.6	0.400		"	"	"	"	"	"	
Cadmium	0.462	0.200		"	"	"	"	"	"	
Copper	9.43	0.400		"	"	"	"	"	"	
Lead	4.40	0.200		"	"	"	"	"	"	
Nickel	12.1	0.400		"	"	"	"	"	"	
Silver	0.0228	0.0200		"	"	"	"	"	"	
Zinc	26.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	19.7	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	7.93	0.0500		"	"	"	"	"	"	
Sodium	68.1	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG03 5'
2404171-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.28	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.457	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/08/24 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.35		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG04 0.5'
2404171-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.83	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	75.7	0.400		"	"	"	"	"	"	
Cadmium	0.333	0.200		"	"	"	"	"	"	
Copper	12.7	0.400		"	"	"	"	"	"	
Lead	8.56	0.200		"	"	"	"	"	"	
Nickel	7.98	0.400		"	"	"	"	"	"	
Silver	0.0428	0.0200		"	"	"	"	"	"	
Zinc	44.5	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	64.0	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	16.8	0.0500		"	"	"	"	"	"	
Sodium	21.3	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG04 0.5'
2404171-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.613	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.266	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.74		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG04 3'
2404171-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.97	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	92.5	0.400		"	"	"	"	"	"	
Cadmium	0.375	0.200		"	"	"	"	"	"	
Copper	10.1	0.400		"	"	"	"	"	"	
Lead	9.46	0.200		"	"	"	"	"	"	
Nickel	9.20	0.400		"	"	"	"	"	"	
Silver	0.0500	0.0200		"	"	"	"	"	"	
Zinc	39.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	74.2	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	14.8	0.0500		"	"	"	"	"	"	
Sodium	14.6	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG04 3'
2404171-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.405	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.2		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.149	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.07		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG04 5'
2404171-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.85	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	85.7	0.400		"	"	"	"	"	"	
Cadmium	0.371	0.200		"	"	"	"	"	"	
Copper	12.4	0.400		"	"	"	"	"	"	
Lead	9.92	0.200		"	"	"	"	"	"	
Nickel	9.04	0.400		"	"	"	"	"	"	
Silver	0.0410	0.0200		"	"	"	"	"	"	
Zinc	44.2	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	19.8	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	5.87	0.0500		"	"	"	"	"	"	
Sodium	9.81	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG04 5'
2404171-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.498	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.83		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 0.5'
2404171-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.60	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	67.5	0.400		"	"	"	"	"	"	
Cadmium	0.336	0.200		"	"	"	"	"	"	
Copper	11.5	0.400		"	"	"	"	"	"	
Lead	8.97	0.200		"	"	"	"	"	"	
Nickel	7.24	0.400		"	"	"	"	"	"	
Silver	0.0412	0.0200		"	"	"	"	"	"	
Zinc	41.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	52.9	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	17.0	0.0500		"	"	"	"	"	"	
Sodium	34.1	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 0.5'
2404171-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.04	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.8		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.406	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 3'
2404171-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.47	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	110	0.400		"	"	"	"	"	"	
Cadmium	0.328	0.200		"	"	"	"	"	"	
Copper	10.1	0.400		"	"	"	"	"	"	
Lead	9.07	0.200		"	"	"	"	"	"	
Nickel	9.52	0.400		"	"	"	"	"	"	
Silver	0.0474	0.0200		"	"	"	"	"	"	
Zinc	38.9	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	27.1	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	6.63	0.0500		"	"	"	"	"	"	
Sodium	13.4	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 3'
2404171-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.598	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.8		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.236	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.90		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 5'
2404171-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.08	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	74.1	0.400	"	"	"	"	"	"	
Cadmium	0.348	0.200	"	"	"	"	"	"	
Copper	6.95	0.400	"	"	"	"	"	"	
Lead	5.04	0.200	"	"	"	"	"	"	
Nickel	7.51	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	32.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	143	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	11.7	0.0500	"	"	"	"	"	"	
Sodium	15.3	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG05 5'
2404171-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.331	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.2		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.154	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.09		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 0.5'
2404171-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.99	0.179		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	86.9	0.357		"	"	"	"	"	"	
Cadmium	0.383	0.179		"	"	"	"	"	"	
Copper	17.1	0.357		"	"	"	"	"	"	
Lead	10.0	0.179		"	"	"	"	"	"	
Nickel	9.25	0.357		"	"	"	"	"	"	
Silver	0.0484	0.0179		"	"	"	"	"	"	
Zinc	54.1	0.357		"	"	"	"	"	"	
Selenium	0.266	0.232		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	36.9	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	13.3	0.0500		"	"	"	"	"	"	
Sodium	36.0	0.0500		"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 0.5'
2404171-16 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.29	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.526	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 3'
2404171-17 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.25	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	39.4	0.400		"	"	"	"	"	"	
Cadmium	0.352	0.200		"	"	"	"	"	"	
Copper	14.7	0.400		"	"	"	"	"	"	
Lead	10.7	0.200		"	"	"	"	"	"	
Nickel	15.3	0.400		"	"	"	"	"	"	
Silver	0.0436	0.0200		"	"	"	"	"	"	
Zinc	54.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0672	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	33.7	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	8.15	0.0500		"	"	"	"	"	"	
Sodium	23.2	0.0500		"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 3'
2404171-17 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.931	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.1		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.360	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 5'
2404171-18 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.79	0.200	mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	88.0	0.400	"	"	"	"	"	"	
Cadmium	0.229	0.200	"	"	"	"	"	"	
Copper	7.17	0.400	"	"	"	"	"	"	
Lead	7.25	0.200	"	"	"	"	"	"	
Nickel	8.12	0.400	"	"	"	"	"	"	
Silver	0.0510	0.0200	"	"	"	"	"	"	
Zinc	28.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	15.6	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	14.2	0.0500	"	"	"	"	"	"	
Sodium	68.7	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG06 5'
2404171-18 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.03	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.3		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.454	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.19		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG07 0.5'
2404171-19 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.37	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	69.0	0.400		"	"	"	"	"	"	
Cadmium	0.317	0.200		"	"	"	"	"	"	
Copper	14.0	0.400		"	"	"	"	"	"	
Lead	9.56	0.200		"	"	"	"	"	"	
Nickel	7.26	0.400		"	"	"	"	"	"	
Silver	0.0412	0.0200		"	"	"	"	"	"	
Zinc	45.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	46.4	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	14.4	0.0500		"	"	"	"	"	"	
Sodium	21.7	0.0500		"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG07 0.5'
2404171-19 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.713	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.9		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.223	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.69		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG07 3'
2404171-20 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0595	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.91	0.200		mg/kg dry	1	BHD0871	04/24/24	05/17/24	EPA 6020B	
Barium	114	0.400		"	"	"	"	"	"	
Cadmium	0.349	0.200		"	"	"	"	"	"	
Copper	10.1	0.400		"	"	"	"	"	"	
Lead	9.82	0.200		"	"	"	"	"	"	
Nickel	11.4	0.400		"	"	"	"	"	"	
Silver	0.0596	0.0200		"	"	"	"	"	"	
Zinc	42.1	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	20.1	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	7.66	0.0500		"	"	"	"	"	"	
Sodium	14.7	0.0500		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG07 3'
2404171-20 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.708	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.5		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.218	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.93		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG07 5'
2404171-21 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.98	0.200	mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	73.9	0.400	"	"	"	"	"	"	
Cadmium	0.462	0.200	"	"	"	"	"	"	
Copper	9.31	0.400	"	"	"	"	"	"	
Lead	9.52	0.200	"	"	"	"	"	"	
Nickel	9.04	0.400	"	"	"	"	"	"	
Silver	0.0390	0.0200	"	"	"	"	"	"	
Zinc	28.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	21.3	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	8.20	0.0500	"	"	"	"	"	"	
Sodium	19.5	0.0500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG07 5'
2404171-21 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.910	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.0		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.250	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG08 0.5'
2404171-22 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.78	0.200		mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	47.7	0.400		"	"	"	"	"	"	
Cadmium	0.293	0.200		"	"	"	"	"	"	
Copper	9.35	0.400		"	"	"	"	"	"	
Lead	6.02	0.200		"	"	"	"	"	"	
Nickel	4.82	0.400		"	"	"	"	"	"	
Silver	0.0242	0.0200		"	"	"	"	"	"	
Zinc	30.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	54.1	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	16.3	0.0500		"	"	"	"	"	"	
Sodium	21.0	0.0500		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG08 0.5'
2404171-22 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.643	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.275	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 15:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.90		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG08 3'
2404171-23 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.08	0.200	mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	52.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.68	0.400	"	"	"	"	"	"	
Lead	5.32	0.200	"	"	"	"	"	"	
Nickel	5.89	0.400	"	"	"	"	"	"	
Silver	0.0211	0.0200	"	"	"	"	"	"	
Zinc	21.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	82.6	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	6.27	0.0500	"	"	"	"	"	"	
Sodium	15.2	0.0500	"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG08 3'
2404171-23 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.434	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.5		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.208	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.94		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG08 5'
2404171-24 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.04	0.200	mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	106	0.400	"	"	"	"	"	"	
Cadmium	0.258	0.200	"	"	"	"	"	"	
Copper	5.92	0.400	"	"	"	"	"	"	
Lead	6.57	0.200	"	"	"	"	"	"	
Nickel	7.77	0.400	"	"	"	"	"	"	
Silver	0.0381	0.0200	"	"	"	"	"	"	
Zinc	26.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	26.6	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	13.0	0.0500	"	"	"	"	"	"	
Sodium	71.7	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG08 5'
2404171-24 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.85	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.3		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.488	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.15		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG09 0.5'
2404171-25 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	3.77	0.200		mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	49.9	0.400		"	"	"	"	"	"	
Cadmium	0.241	0.200		"	"	"	"	"	"	
Copper	10.3	0.400		"	"	"	"	"	"	
Lead	6.67	0.200		"	"	"	"	"	"	
Nickel	5.59	0.400		"	"	"	"	"	"	
Silver	0.0287	0.0200		"	"	"	"	"	"	
Zinc	33.1	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	101	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	32.1	0.0500		"	"	"	"	"	"	
Sodium	27.4	0.0500		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG09 0.5'
2404171-25 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.608	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.314	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.88		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG09 3'
2404171-26 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.54	0.180		mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	69.3	0.360		"	"	"	"	"	"	
Cadmium	0.199	0.180		"	"	"	"	"	"	
Copper	6.38	0.360		"	"	"	"	"	"	
Lead	6.11	0.180		"	"	"	"	"	"	
Nickel	7.45	0.360		"	"	"	"	"	"	
Silver	0.0190	0.0180		"	"	"	"	"	"	
Zinc	22.7	0.360		"	"	"	"	"	"	
Selenium	ND	0.234		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	75.9	0.0500		mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	6.88	0.0500		"	"	"	"	"	"	
Sodium	19.0	0.0500		"	"	"	"	"	"	

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 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

BKG09 3'
2404171-26 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.560	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.237	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.78		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG09 5'
2404171-27 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHD0599	04/18/24	05/29/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.67	0.200	mg/kg dry	1	BHD0873	04/24/24	05/09/24	EPA 6020B	
Barium	108	0.400	"	"	"	"	"	"	
Cadmium	0.249	0.200	"	"	"	"	"	"	
Copper	6.64	0.400	"	"	"	"	"	"	
Lead	6.17	0.200	"	"	"	"	"	"	
Nickel	8.08	0.400	"	"	"	"	"	"	
Silver	0.0336	0.0200	"	"	"	"	"	"	
Zinc	28.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHD0673	04/19/24	04/19/24	EPA 7196A	

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

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	29.7	0.0500	mg/L dry	1	BHD0959	04/25/24	05/24/24	EPA 6020B	
Magnesium	17.2	0.0500	"	"	"	"	"	"	
Sodium	102	0.0500	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

BKG09 5'
2404171-27 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.69	0.00100	units	1	BHE0793	05/24/24	05/24/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.3		%	1	BHD0533	04/17/24	04/17/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.674	0.0100	mmhos/cm	1	BHD0964	04/25/24	05/01/24	EPA 120.1	

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

Date Sampled: **04/09/24 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.99		pH Units	1	BHD0963	04/25/24	05/01/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN

Project Manager: Paul Henchan

Reported:
05/29/24 09:45

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

Summit Scientific

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

Batch BHD0595 - EPA 3050B

Blank (BHD0595-BLK1)											
Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	ND	2.00	mg/L								
LCS (BHD0595-BS1)											
Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	5.39	2.00	mg/L	5.00		108	80-120				
Duplicate (BHD0595-DUP1)											
Source: 2404171-01 Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	0.672	2.00	mg/L		0.694			3.25	20		
Matrix Spike (BHD0595-MS1)											
Source: 2404171-01 Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	5.69	2.00	mg/L	5.00	0.694	100	75-125				
Matrix Spike Dup (BHD0595-MSD1)											
Source: 2404171-01 Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	5.88	2.00	mg/L	5.00	0.694	104	75-125	3.19	25		

Batch BHD0599 - EPA 3050B

Blank (BHD0599-BLK1)											
Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	ND	2.00	mg/L								
LCS (BHD0599-BS1)											
Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	5.23	2.00	mg/L	5.00		105	80-120				
Duplicate (BHD0599-DUP1)											
Source: 2403128-10 Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	0.0953	2.00	mg/L		0.129			30.1	20		QR-01
Matrix Spike (BHD0599-MS1)											
Source: 2403128-10 Prepared: 04/18/24 Analyzed: 05/29/24											
Boron	5.82	2.00	mg/L	4.98	0.129	114	75-125				

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

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

Summit Scientific

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

Batch BHD0599 - EPA 3050B

Matrix Spike Dup (BHD0599-MSD1)

Source: 2403128-10

Prepared: 04/18/24 Analyzed: 05/29/24

Boron	6.09	2.00	mg/L	4.98	0.129	120	75-125	4.62	25	
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Fremont Environmental
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Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHD0871 - EPA 3050B

Blank (BHD0871-BLK1)

Prepared: 04/24/24 Analyzed: 05/17/24

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 (BHD0871-BS1)

Prepared: 04/24/24 Analyzed: 05/17/24

Arsenic	36.1	0.200	mg/kg wet	40.0	90.2	80-120
Barium	38.0	0.400	"	40.0	95.1	80-120
Cadmium	1.91	0.200	"	2.00	95.3	80-120
Copper	37.4	0.400	"	40.0	93.6	80-120
Lead	19.3	0.200	"	20.0	96.5	80-120
Nickel	36.7	0.400	"	40.0	91.9	80-120
Silver	1.92	0.0200	"	2.00	95.8	80-120
Zinc	36.3	0.400	"	40.0	90.7	80-120
Selenium	3.70	0.260	"	4.00	92.4	80-120

Duplicate (BHD0871-DUP1)

Source: 2404171-01

Prepared: 04/24/24 Analyzed: 05/17/24

Arsenic	3.39	0.200	mg/kg dry	3.54	4.48	20
Barium	80.1	0.400	"	72.5	9.96	20
Cadmium	0.224	0.200	"	0.225	0.388	20
Copper	7.05	0.400	"	7.04	0.0305	20
Lead	7.21	0.200	"	7.10	1.56	20
Nickel	8.15	0.400	"	7.99	1.94	20
Silver	0.0523	0.0200	"	0.0527	0.784	20
Zinc	28.9	0.400	"	27.6	4.65	20
Selenium	0.244	0.260	"	0.243	0.129	20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHD0871 - EPA 3050B

Matrix Spike (BHD0871-MS1)

Source: 2404171-01

Prepared: 04/24/24 Analyzed: 05/17/24

Arsenic	45.7	0.200	mg/kg dry	45.0	3.54	93.5	75-125		
Barium	119	0.400	"	45.0	72.5	103	75-125		
Cadmium	2.49	0.200	"	2.25	0.225	101	75-125		
Copper	49.8	0.400	"	45.0	7.04	94.9	75-125		
Lead	28.8	0.200	"	22.5	7.10	96.6	75-125		
Nickel	51.3	0.400	"	45.0	7.99	96.1	75-125		
Silver	2.26	0.0200	"	2.25	0.0527	98.0	75-125		
Zinc	73.2	0.400	"	45.0	27.6	101	75-125		
Selenium	3.75	0.260	"	4.50	0.243	77.8	75-125		

Matrix Spike Dup (BHD0871-MSD1)

Source: 2404171-01

Prepared: 04/24/24 Analyzed: 05/17/24

Arsenic	45.5	0.200	mg/kg dry	45.0	3.54	93.1	75-125	0.367	25
Barium	117	0.400	"	45.0	72.5	99.6	75-125	1.22	25
Cadmium	2.48	0.200	"	2.25	0.225	100	75-125	0.725	25
Copper	49.6	0.400	"	45.0	7.04	94.5	75-125	0.330	25
Lead	28.8	0.200	"	22.5	7.10	96.5	75-125	0.0484	25
Nickel	51.3	0.400	"	45.0	7.99	96.1	75-125	0.00878	25
Silver	2.23	0.0200	"	2.25	0.0527	96.6	75-125	1.41	25
Zinc	73.0	0.400	"	45.0	27.6	101	75-125	0.307	25
Selenium	3.63	0.260	"	4.50	0.243	75.3	75-125	3.10	25

Post Spike (BHD0871-PS1)

Source: 2404171-01

Prepared: 04/24/24 Analyzed: 05/17/24

Arsenic	108		ug/l	100	7.80	100	75-125		
Barium	252		"	100	160	92.4	75-125		
Cadmium	5.53		"	5.00	0.496	101	75-125		
Copper	115		"	100	15.5	99.3	75-125		
Lead	64.3		"	50.0	15.6	97.2	75-125		
Nickel	117		"	100	17.6	99.1	75-125		
Silver	5.11		"	5.00	0.116	99.8	75-125		
Zinc	161		"	100	60.8	101	75-125		
Selenium	9.32		"	10.0	0.536	87.8	75-125		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHD0873 - EPA 3050B

Blank (BHD0873-BLK1)

Prepared: 04/24/24 Analyzed: 05/09/24

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 (BHD0873-BS1)

Prepared: 04/24/24 Analyzed: 05/09/24

Arsenic	38.9	0.200	mg/kg wet	40.0	97.3	80-120
Barium	39.1	0.400	"	40.0	97.8	80-120
Cadmium	1.88	0.200	"	2.00	94.2	80-120
Copper	38.3	0.400	"	40.0	95.9	80-120
Lead	18.9	0.200	"	20.0	94.4	80-120
Nickel	38.1	0.400	"	40.0	95.2	80-120
Silver	1.87	0.0200	"	2.00	93.7	80-120
Zinc	38.1	0.400	"	40.0	95.3	80-120
Selenium	4.05	0.260	"	4.00	101	80-120

Duplicate (BHD0873-DUP1)

Source: 2404158-01

Prepared: 04/24/24 Analyzed: 05/09/24

Arsenic	6.33	0.200	mg/kg dry	6.25	1.37	20	
Barium	125	0.400	"	234	60.6	20	QR-04
Cadmium	0.288	0.200	"	0.283	1.72	20	
Copper	15.7	0.400	"	15.3	2.92	20	
Lead	12.7	0.200	"	12.8	0.854	20	
Nickel	17.6	0.400	"	17.4	1.18	20	
Silver	0.0724	0.0200	"	0.0678	6.56	20	
Zinc	59.5	0.400	"	59.5	0.139	20	
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHD0873 - EPA 3050B

Matrix Spike (BHD0873-MS1)

Source: 2404158-01

Prepared: 04/24/24 Analyzed: 05/09/24

Arsenic	48.9	0.200	mg/kg dry	44.9	6.25	95.0	75-125				
Barium	154	0.400	"	44.9	234	NR	75-125				QM-07
Cadmium	2.43	0.200	"	2.24	0.283	95.7	75-125				
Copper	57.4	0.400	"	44.9	15.3	93.9	75-125				
Lead	32.4	0.200	"	22.4	12.8	87.4	75-125				
Nickel	60.4	0.400	"	44.9	17.4	95.8	75-125				
Silver	2.17	0.0200	"	2.24	0.0678	93.7	75-125				
Zinc	102	0.400	"	44.9	59.5	93.9	75-125				
Selenium	4.47	0.260	"	4.49	ND	99.6	75-125				

Matrix Spike Dup (BHD0873-MSD1)

Source: 2404158-01

Prepared: 04/24/24 Analyzed: 05/09/24

Arsenic	48.3	0.200	mg/kg dry	44.9	6.25	93.6	75-125	1.28	25		
Barium	154	0.400	"	44.9	234	NR	75-125	0.0816	25		QM-07
Cadmium	2.47	0.200	"	2.24	0.283	97.4	75-125	1.61	25		
Copper	56.8	0.400	"	44.9	15.3	92.5	75-125	1.07	25		
Lead	32.4	0.200	"	22.4	12.8	87.4	75-125	0.0208	25		
Nickel	59.4	0.400	"	44.9	17.4	93.8	75-125	1.55	25		
Silver	2.17	0.0200	"	2.24	0.0678	93.7	75-125	0.0620	25		
Zinc	100	0.400	"	44.9	59.5	90.7	75-125	1.43	25		
Selenium	4.25	0.260	"	4.49	ND	94.6	75-125	5.21	25		

Post Spike (BHD0873-PS1)

Source: 2404158-01

Prepared: 04/24/24 Analyzed: 05/09/24

Arsenic	117		ug/l	100	13.4	104	75-125				
Barium	628		"	100	500	128	75-125				QM-07
Cadmium	5.61		"	5.00	0.607	100	75-125				
Copper	132		"	100	32.7	99.8	75-125				
Lead	75.9		"	50.0	27.4	97.0	75-125				
Nickel	138		"	100	37.2	101	75-125				
Silver	5.18		"	5.00	0.145	101	75-125				
Zinc	231		"	100	128	104	75-125				
Selenium	11.2		"	10.0	0.320	108	75-125				

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Project: Noble - Rouse (BKG)
Project Number: UWRWE-A3657-ABN
Project Manager: Paul Henchan

Reported:
05/29/24 09:45

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHD0672 - 3060A Mod

Blank (BHD0672-BLK1)											
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHD0672-BS1)											
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	25.0	0.30	mg/kg wet	25.0	99.8	80-120					
Duplicate (BHD0672-DUP1)											
											Source: 2404169-01
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHD0672-MS1)											
											Source: 2404169-01
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	27.7	0.30	mg/kg dry	28.1	ND	98.6	75-125				
Matrix Spike Dup (BHD0672-MSD1)											
											Source: 2404169-01
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	27.7	0.30	mg/kg dry	28.1	ND	98.4	75-125	0.203		20	

Batch BHD0673 - 3060A Mod

Blank (BHD0673-BLK1)											
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHD0673-BS1)											
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	25.0	0.30	mg/kg wet	25.0	100	80-120					
Duplicate (BHD0673-DUP1)											
											Source: 2404171-18
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHD0673-MS1)											
											Source: 2404171-18
											Prepared & Analyzed: 04/19/24
Chromium, Hexavalent	30.8	0.30	mg/kg dry	30.8	ND	100	75-125				

Summit Scientific

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Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

Hexavalent Chromium by EPA Method 7196 - Quality Control

Summit Scientific

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

Batch BHD0673 - 3060A Mod

Matrix Spike Dup (BHD0673-MSD1)

Source: 2404171-18

Prepared & Analyzed: 04/19/24

Chromium, Hexavalent	30.7	0.30	mg/kg dry	30.8	ND	99.8	75-125	0.400	20	
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Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

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

Summit Scientific

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

Batch BHD0959 - General Preparation

Blank (BHD0959-BLK1)

Prepared: 04/25/24 Analyzed: 05/24/24

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

LCS (BHD0959-BS1)

Prepared: 04/25/24 Analyzed: 05/24/24

Calcium	5.03	0.0500	mg/L wet	5.00		101	70-130			
Magnesium	4.83	0.0500	"	5.00		96.7	70-130			
Sodium	4.90	0.0500	"	5.00		98.0	70-130			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

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 BHD0533 - General Preparation

Duplicate (BHD0533-DUP1)		Source: 2404171-01			Prepared & Analyzed: 04/17/24			
% Solids	88.2		%		88.1		0.0557	20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)
 Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

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

Summit Scientific

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

Batch BHD0964 - General Preparation

Blank (BHD0964-BLK1)

Prepared: 04/25/24 Analyzed: 05/01/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHD0964-BS1)

Prepared: 04/25/24 Analyzed: 05/01/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHD0964-DUP1)

Source: 2404166-01

Prepared: 04/25/24 Analyzed: 05/01/24

Specific Conductance (EC) 0.317 0.0100 mmhos/cm 0.319 0.691 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN
 Project Manager: Paul Henchan

Reported:
 05/29/24 09:45

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

Summit Scientific

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

Batch BHD0963 - General Preparation

LCS (BHD0963-BS1)

Prepared: 04/25/24 Analyzed: 05/01/24

pH	9.11	pH Units	9.18	99.2	95-105
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Duplicate (BHD0963-DUP1)

Source: 2404166-01

Prepared: 04/25/24 Analyzed: 05/01/24

pH	8.98	pH Units	8.98	0.00	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Rouse (BKG)

Project Number: UWRWE-A3657-ABN

Project Manager: Paul Henchan

Reported:
05/29/24 09:45

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.
- 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