

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 24, 2023

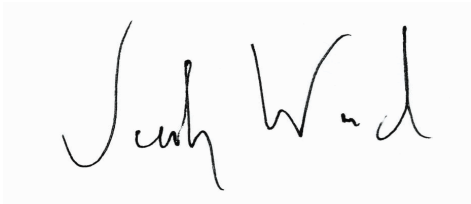
Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Patriot B16-20 FL08

Work Order #2308292

Enclosed are the results of analyses for samples received by Summit Scientific on 08/14/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@3'	2308292-01	Soil	08/14/23 14:00	08/14/23 16:30
BKG01@4'	2308292-02	Soil	08/14/23 14:05	08/14/23 16:30
BKG02@3'	2308292-03	Soil	08/14/23 14:10	08/14/23 16:30
BKG02@4'	2308292-04	Soil	08/14/23 14:15	08/14/23 16:30
BKG03@3'	2308292-05	Soil	08/14/23 14:20	08/14/23 16:30
BKG03@4'	2308292-06	Soil	08/14/23 14:25	08/14/23 16:30
BKG04@3'	2308292-07	Soil	08/14/23 14:30	08/14/23 16:30
BKG04@4'	2308292-08	Soil	08/14/23 14:35	08/14/23 16:30
BKG05@3'	2308292-09	Soil	08/14/23 14:40	08/14/23 16:30
BKG05@4'	2308292-10	Soil	08/14/23 14:45	08/14/23 16:30

Summit Scientific

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

Lab ID	Page 1 of 1
2308292	

		Send Data To:	Send Invoice To:
Client: Fremont Environmental		Project Manager: Paul Henehan	Company: Noble
Address:		E-Mail: Fremont Distribution List	Project Name/Location: Patriot B16-20 FLO8
City/State/Zip:			AFE#:
Phone: 303-261-6246		Project Name: Patriot B16-20 FLO8	PO/Billing Codes: UWRWE-A2795-ABN
Sampler Name: Stanley Gilbert		Project Number:	Contact: Dan Peterson

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	BH601 3'	8/14/23	14:00	2			X			X					X	X		
2	BH601 4'		14:05															
3	BH602 3'		14:10															
4	BH602 4'		14:15															
5	BH603 3'		14:20															
6	BH603 4'		14:25															
7	BH604 3'		14:30															
8	BH604 4'		14:35															
9	BH605 3'		14:40															
10	BH605 4'		14:45															
11																		
12																		
13																		
14																		
15																		

Relinquished by:	Date/Time: 8/14/23 16:00	Received by: Summit North	Date/Time: 8/14/23 16:00	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 8/14/23 16:30	Received by:	Date/Time: 8/14/23 16:30	Same Day <input checked="" type="checkbox"/>	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 11.7	Corrected Temperature: 8	IR gun #:	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2308292

Client: Fremont Client Project ID: Patient Bill-20 FLO8

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

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

Temp (°C) 11.7 Thermometer # 1

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

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

[Signature] Custodian Printed Name

08/14/23 Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG01@3'
2308292-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.266	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.950	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	77.2	0.400	"	"	"	"	"	"	
Cadmium	0.365	0.200	"	"	"	"	"	"	
Copper	1.75	0.400	"	"	"	"	"	"	
Lead	6.88	0.200	"	"	"	"	"	"	
Nickel	2.30	0.400	"	"	"	"	"	"	
Silver	0.0503	0.0200	"	"	"	"	"	"	
Zinc	8.24	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	16.6	0.0561	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	6.82	0.0561	"	"	"	"	"	"	
Sodium	3.72	0.0561	"	"	"	"	"	"	

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 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG01@3'
2308292-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.194	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.1		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.724	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.28		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG01@4'
2308292-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.448	0.0100		mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.875	0.200		mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	102	0.400		"	"	"	"	"	"	
Cadmium	0.532	0.200		"	"	"	"	"	"	
Copper	1.30	0.400		"	"	"	"	"	"	
Lead	8.73	0.200		"	"	"	"	"	"	
Nickel	2.54	0.400		"	"	"	"	"	"	
Silver	0.0901	0.0200		"	"	"	"	"	"	
Zinc	9.25	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	19.8	0.0596		mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	5.84	0.0596		"	"	"	"	"	"	
Sodium	10.6	0.0596		"	"	"	"	"	"	

Calculated Analysis

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Project: Noble - Patriot B16-20 FL08
Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG01@4'
2308292-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.538	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.9		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.656	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.51		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG02@3'
2308292-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.368	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.735	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	119	0.400	"	"	"	"	"	"	
Cadmium	0.349	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	7.41	0.200	"	"	"	"	"	"	
Nickel	0.899	0.400	"	"	"	"	"	"	
Silver	0.0648	0.0200	"	"	"	"	"	"	
Zinc	5.94	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	86.1	0.0600	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	6.75	0.0600	"	"	"	"	"	"	
Sodium	20.5	0.0600	"	"	"	"	"	"	

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Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG02@3'
2308292-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.572	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.4		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.845	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.78		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG02@4'
2308292-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.271	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.504	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	29.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	3.12	0.200	"	"	"	"	"	"	
Nickel	0.578	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.29	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	56.6	0.0523	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	6.09	0.0523	"	"	"	"	"	"	
Sodium	9.60	0.0523	"	"	"	"	"	"	

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Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG02@4'
2308292-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.324	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.597	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG03@3'
2308292-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.314	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.437	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	29.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	4.17	0.200	"	"	"	"	"	"	
Nickel	0.671	0.400	"	"	"	"	"	"	
Silver	0.0376	0.0200	"	"	"	"	"	"	
Zinc	4.11	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	12.3	0.0511	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	3.31	0.0511	"	"	"	"	"	"	
Sodium	8.72	0.0511	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG03@3'
2308292-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.570	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.8		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.410	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG03@4'
2308292-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.187	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.494	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	21.2	0.400	"	"	"	"	"	"	
Cadmium	0.215	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	3.61	0.200	"	"	"	"	"	"	
Nickel	0.658	0.400	"	"	"	"	"	"	
Silver	0.0319	0.0200	"	"	"	"	"	"	
Zinc	3.46	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	16.4	0.0511	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	3.75	0.0511	"	"	"	"	"	"	
Sodium	5.46	0.0511	"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG03@4'
2308292-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.316	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.462	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.60		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG04@3'
2308292-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.277	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.770	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	88.8	0.400	"	"	"	"	"	"	
Cadmium	0.434	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	7.65	0.200	"	"	"	"	"	"	
Nickel	1.16	0.400	"	"	"	"	"	"	
Silver	0.0567	0.0200	"	"	"	"	"	"	
Zinc	5.71	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.6	0.0549	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	6.21	0.0549	"	"	"	"	"	"	
Sodium	4.15	0.0549	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG04@3'
2308292-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.196	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.434	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG04@4'
2308292-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.233	0.0100		mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.492	0.200		mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	49.0	0.400		"	"	"	"	"	"	
Cadmium	0.331	0.200		"	"	"	"	"	"	
Copper	ND	0.400		"	"	"	"	"	"	
Lead	5.14	0.200		"	"	"	"	"	"	
Nickel	0.717	0.400		"	"	"	"	"	"	
Silver	0.0422	0.0200		"	"	"	"	"	"	
Zinc	4.60	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	21.3	0.0528		mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	5.78	0.0528		"	"	"	"	"	"	
Sodium	5.13	0.0528		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG04@4'
2308292-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.254	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.357	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG05@3'
2308292-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	0.284	0.0100		mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.251	0.200		mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	11.6	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	ND	0.400		"	"	"	"	"	"	
Lead	1.60	0.200		"	"	"	"	"	"	
Nickel	0.519	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	2.22	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	22.6	0.0507		mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	3.70	0.0507		"	"	"	"	"	"	
Sodium	1.14	0.0507		"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

BKG05@3'
2308292-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0586	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.6		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.453	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.50		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG05@4'
2308292-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	0.149	0.0100	mg/L	1	BGH0573	08/15/23	08/16/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.334	0.200	mg/kg dry	1	BGH0568	08/15/23	08/16/23	EPA 6020B	
Barium	17.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	ND	0.400	"	"	"	"	"	"	
Lead	2.41	0.200	"	"	"	"	"	"	
Nickel	0.543	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.18	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0571	08/15/23	08/15/23	EPA 7196A	

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

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	25.1	0.0511	mg/L dry	1	BGH0563	08/14/23	08/16/23	EPA 6020B	
Magnesium	3.31	0.0511	"	"	"	"	"	"	
Sodium	1.00	0.0511	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

BKG05@4'
2308292-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0498	0.00100	units	1	BGH0647	08/16/23	08/16/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BGH0567	08/15/23	08/15/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.250	0.0100	mmhos/cm	1	BGH0600	08/15/23	08/15/23	EPA 120.1	

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

Date Sampled: **08/14/23 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BGH0599	08/15/23	08/15/23	EPA 9045D	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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

Summit Scientific

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

Batch BGH0573 - EPA 3050B

Blank (BGH0573-BLK1)

Prepared: 08/15/23 Analyzed: 08/16/23

Boron ND 0.0100 mg/L

LCS (BGH0573-BS1)

Prepared: 08/15/23 Analyzed: 08/16/23

Boron 5.70 0.0100 mg/L 5.00 114 80-120

Duplicate (BGH0573-DUP1)

Source: 2308291-03

Prepared: 08/15/23 Analyzed: 08/16/23

Boron 0.173 0.0100 mg/L 0.195 11.8 20

Matrix Spike (BGH0573-MS1)

Source: 2308291-03

Prepared: 08/15/23 Analyzed: 08/16/23

Boron 6.57 0.0100 mg/L 5.00 0.195 128 75-125 QM-07

Matrix Spike Dup (BGH0573-MSD1)

Source: 2308291-03

Prepared: 08/15/23 Analyzed: 08/16/23

Boron 7.16 0.0100 mg/L 5.00 0.195 139 75-125 8.61 25 QM-07

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0568 - EPA 3050B

Blank (BGH0568-BLK1)

Prepared: 08/15/23 Analyzed: 08/16/23

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

LCS (BGH0568-BS1)

Prepared: 08/15/23 Analyzed: 08/16/23

Arsenic	37.0	0.200	mg/kg wet	40.0	92.4	80-120
Barium	34.5	0.400	"	40.0	86.1	80-120
Cadmium	1.71	0.200	"	2.00	85.6	80-120
Copper	35.8	0.400	"	40.0	89.4	80-120
Lead	18.0	0.200	"	20.0	89.8	80-120
Nickel	34.7	0.400	"	40.0	86.8	80-120
Silver	1.62	0.0200	"	2.00	81.2	80-120
Zinc	36.2	0.400	"	40.0	90.5	80-120

Duplicate (BGH0568-DUP1)

Source: 2308292-01

Prepared: 08/15/23 Analyzed: 08/16/23

Arsenic	1.02	0.200	mg/kg dry	0.950	6.98	20
Barium	86.8	0.400	"	77.2	11.7	20
Cadmium	0.383	0.200	"	0.365	4.80	20
Copper	1.80	0.400	"	1.75	3.06	20
Lead	7.49	0.200	"	6.88	8.59	20
Nickel	2.55	0.400	"	2.30	10.2	20
Silver	0.0556	0.0200	"	0.0503	10.2	20
Zinc	8.85	0.400	"	8.24	7.16	20
Selenium	ND	0.260	"	ND		200

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0568 - EPA 3050B

Matrix Spike (BGH0568-MS1)

Source: 2308292-01

Prepared: 08/15/23 Analyzed: 08/16/23

Arsenic	12.9	0.200	mg/kg dry	44.9	0.950	26.5	75-125				QM-01
Barium	125	0.400	"	44.9	77.2	106	75-125				
Cadmium	2.45	0.200	"	2.24	0.365	92.9	75-125				
Copper	13.7	0.400	"	44.9	1.75	26.7	75-125				QM-01
Lead	26.6	0.200	"	22.4	6.88	87.8	75-125				
Nickel	13.8	0.400	"	44.9	2.30	25.6	75-125				QM-01
Silver	2.06	0.0200	"	2.24	0.0503	89.4	75-125				
Zinc	21.4	0.400	"	44.9	8.24	29.4	75-125				QM-01

Matrix Spike Dup (BGH0568-MSD1)

Source: 2308292-01

Prepared: 08/15/23 Analyzed: 08/16/23

Arsenic	12.8	0.200	mg/kg dry	44.9	0.950	26.3	75-125	0.693	25		QM-01
Barium	122	0.400	"	44.9	77.2	101	75-125	1.99	25		
Cadmium	2.51	0.200	"	2.24	0.365	95.6	75-125	2.39	25		
Copper	13.9	0.400	"	44.9	1.75	27.1	75-125	1.31	25		QM-01
Lead	26.3	0.200	"	22.4	6.88	86.5	75-125	1.09	25		
Nickel	13.8	0.400	"	44.9	2.30	25.7	75-125	0.0227	25		QM-01
Silver	2.00	0.0200	"	2.24	0.0503	87.0	75-125	2.72	25		
Zinc	22.0	0.400	"	44.9	8.24	30.5	75-125	2.40	25		QM-01

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 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0571 - 3060A Mod

Blank (BGH0571-BLK1)

Prepared & Analyzed: 08/15/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH0571-BS1)

Prepared & Analyzed: 08/15/23

Chromium, Hexavalent 23.2 0.30 mg/kg wet 25.0 92.6 80-120

Duplicate (BGH0571-DUP1)

Source: 2308292-01

Prepared & Analyzed: 08/15/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGH0571-MS1)

Source: 2308292-01

Prepared & Analyzed: 08/15/23

Chromium, Hexavalent 25.6 0.30 mg/kg dry 28.0 ND 91.2 75-125

Matrix Spike Dup (BGH0571-MSD1)

Source: 2308292-01

Prepared & Analyzed: 08/15/23

Chromium, Hexavalent 25.9 0.30 mg/kg dry 28.0 ND 92.4 75-125 1.31 20

Summit Scientific

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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0563 - General Preparation

Blank (BGH0563-BLK1)

Prepared: 08/14/23 Analyzed: 08/15/23

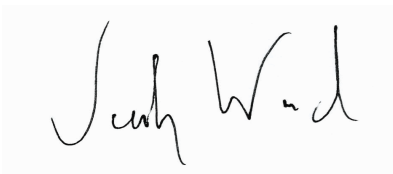
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGH0563-BS1)

Prepared: 08/14/23 Analyzed: 08/15/23

Calcium	4.64	0.0500	mg/L wet	5.00	92.7	70-130				
Magnesium	5.27	0.0500	"	5.00	105	70-130				
Sodium	5.42	0.0500	"	5.00	108	70-130				

Summit Scientific



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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0567 - General Preparation

Duplicate (BGH0567-DUP1)

Source: 2308283-01

Prepared & Analyzed: 08/15/23

% Solids	79.1		%		78.4			0.937	20	
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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08
 Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0600 - General Preparation

Blank (BGH0600-BLK1)

Prepared & Analyzed: 08/15/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH0600-BS1)

Prepared & Analyzed: 08/15/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 104 95-105


Duplicate (BGH0600-DUP1)

Source: 2308291-03

Prepared & Analyzed: 08/15/23

Specific Conductance (EC) 0.798 0.0100 mmhos/cm 0.811 1.53 20

Summit Scientific



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Fremont Environmental
 PO Box 1289
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Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
 Project Manager: Paul Henchan

Reported:
 08/24/23 14:06

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 BGH0599 - General Preparation

LCS (BGH0599-BS1)

Prepared & Analyzed: 08/15/23

pH 9.08 pH Units 9.18 98.9 95-105

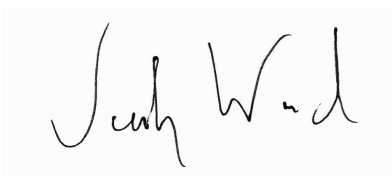
Duplicate (BGH0599-DUP1)

Source: 2308291-03

Prepared & Analyzed: 08/15/23

pH 8.12 pH Units 8.12 0.00 20

Summit Scientific



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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Patriot B16-20 FL08

Project Number: UWRWE-A2795-ABN
Project Manager: Paul Henchan

Reported:
08/24/23 14:06

Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference