

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 23, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Ocoma C17-15/TB (Background)

Work Order #2409199

Enclosed are the results of analyses for samples received by Summit Scientific on 09/13/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN

Project Manager: Paul Henchan

Reported:

09/23/24 08:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG1 2FT	2409199-01	Soil	09/10/24 00:00	09/13/24 16:30
BKG2 2FT	2409199-02	Soil	09/10/24 00:00	09/13/24 16:30
BKG3 2FT	2409199-03	Soil	09/10/24 00:00	09/13/24 16:30
BKG4 2FT	2409199-04	Soil	09/10/24 00:00	09/13/24 16:30
BKG5 2FT	2409199-05	Soil	09/10/24 00:00	09/13/24 16:30

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S₂

Sample Receipt Checklist

S2 Work Order# 2409199

Client: Fremont Client Project ID: NOI - Ocoma C17-19/TB (Background)

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"/>	OK
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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any): <u>inappropriate bottleware - requires qualifiers</u>				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS
Custodian Printed Name

9/13/24
Date/Time



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Project Number: UWRWE-A2638-ABN
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09/23/24 08:40

BKG1 2FT
2409199-01 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0492	09/16/24	09/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.732	0.200		mg/kg dry	1	BHI0483	09/16/24	09/18/24	EPA 6020B	
Barium	51.6	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.64	0.400		"	"	"	"	"	"	
Lead	4.74	0.200		"	"	"	"	"	"	
Nickel	1.69	0.400		"	"	"	"	"	"	
Silver	0.0337	0.0200		"	"	"	"	"	"	
Zinc	7.13	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI0541	09/17/24	09/17/24	EPA 7196A	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	188	0.0500		mg/L dry	1	BHI0565	09/17/24	09/19/24	EPA 6020B	
Magnesium	36.1	0.0500		"	"	"	"	"	"	
Sodium	11.6	0.0500		"	"	"	"	"	"	

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Reported:
 09/23/24 08:40

BKG1 2FT
2409199-01 (Soil)

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Calculated Analysis

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.203	0.00100	units	1	BHI0688	09/20/24	09/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.2		%	1	BHI0497	09/16/24	09/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.120	0.0100	mmhos/cm	1	BHI0616	09/18/24	09/19/24	EPA 120.1	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.47		pH Units	1	BHI0617	09/18/24	09/19/24	EPA 9045D	

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09/23/24 08:40

BKG2 2FT
2409199-02 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0492	09/16/24	09/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	0.754	0.200		mg/kg dry	1	BHI0483	09/16/24	09/18/24	EPA 6020B	
Barium	46.2	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	1.12	0.400		"	"	"	"	"	"	
Lead	4.10	0.200		"	"	"	"	"	"	
Nickel	1.54	0.400		"	"	"	"	"	"	
Silver	0.0321	0.0200		"	"	"	"	"	"	
Zinc	5.51	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI0541	09/17/24	09/17/24	EPA 7196A	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	173	0.0500		mg/L dry	1	BHI0565	09/17/24	09/19/24	EPA 6020B	
Magnesium	72.7	0.0500		"	"	"	"	"	"	
Sodium	161	0.0500		"	"	"	"	"	"	

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Reported:
09/23/24 08:40

BKG2 2FT
2409199-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.59	0.00100	units	1	BHI0688	09/20/24	09/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.5		%	1	BHI0497	09/16/24	09/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.04	0.0100	mmhos/cm	1	BHI0616	09/18/24	09/19/24	EPA 120.1	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BHI0617	09/18/24	09/19/24	EPA 9045D	

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Reported:
09/23/24 08:40

BKG3 2FT
2409199-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0492	09/16/24	09/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.560	0.200	mg/kg dry	1	BHI0483	09/16/24	09/18/24	EPA 6020B	
Barium	30.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.958	0.400	"	"	"	"	"	"	
Lead	3.45	0.200	"	"	"	"	"	"	
Nickel	1.19	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.64	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0541	09/17/24	09/17/24	EPA 7196A	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	102	0.0500	mg/L dry	1	BHI0565	09/17/24	09/19/24	EPA 6020B	
Magnesium	48.5	0.0500	"	"	"	"	"	"	
Sodium	353	0.0500	"	"	"	"	"	"	

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09/23/24 08:40

BKG3 2FT
2409199-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.21	0.00100	units	1	BHI0688	09/20/24	09/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.2		%	1	BHI0497	09/16/24	09/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.54	0.0100	mmhos/cm	1	BHI0616	09/18/24	09/19/24	EPA 120.1	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHI0617	09/18/24	09/19/24	EPA 9045D	

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Reported:
09/23/24 08:40

BKG4 2FT
2409199-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0492	09/16/24	09/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.684	0.200	mg/kg dry	1	BHI0483	09/16/24	09/18/24	EPA 6020B	
Barium	82.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.30	0.400	"	"	"	"	"	"	
Lead	6.62	0.200	"	"	"	"	"	"	
Nickel	1.77	0.400	"	"	"	"	"	"	
Silver	0.0377	0.0200	"	"	"	"	"	"	
Zinc	8.02	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0541	09/17/24	09/17/24	EPA 7196A	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	169	0.0500	mg/L dry	1	BHI0565	09/17/24	09/19/24	EPA 6020B	
Magnesium	34.3	0.0500	"	"	"	"	"	"	
Sodium	18.6	0.0500	"	"	"	"	"	"	

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09/23/24 08:40

BKG4 2FT
2409199-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.341	0.00100	units	1	BHI0688	09/20/24	09/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.3		%	1	BHI0497	09/16/24	09/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.137	0.0100	mmhos/cm	1	BHI0616	09/18/24	09/19/24	EPA 120.1	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHI0617	09/18/24	09/19/24	EPA 9045D	

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Reported:
09/23/24 08:40

BKG5 2FT
2409199-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BHI0492	09/16/24	09/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.610	0.200	mg/kg dry	1	BHI0483	09/16/24	09/18/24	EPA 6020B	
Barium	39.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.43	0.400	"	"	"	"	"	"	
Lead	5.83	0.200	"	"	"	"	"	"	
Nickel	1.35	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.92	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0541	09/17/24	09/17/24	EPA 7196A	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	51.0	0.0500	mg/L dry	1	BHI0565	09/17/24	09/19/24	EPA 6020B	
Magnesium	12.8	0.0500	"	"	"	"	"	"	
Sodium	4.95	0.0500	"	"	"	"	"	"	

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Reported:
09/23/24 08:40

BKG5 2FT
2409199-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.161	0.00100	units	1	BHI0688	09/20/24	09/20/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.7		%	1	BHI0497	09/16/24	09/18/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.475	0.0100	mmhos/cm	1	BHI0616	09/18/24	09/19/24	EPA 120.1	

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

Date Sampled: **09/10/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.13		pH Units	1	BHI0617	09/18/24	09/19/24	EPA 9045D	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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			%REC	Limits	RPD	Limit	

Batch BHI0492 - EPA 3050B

Blank (BHI0492-BLK1)

Prepared: 09/16/24 Analyzed: 09/17/24

Boron ND 2.00 mg/L

LCS (BHI0492-BS1)

Prepared: 09/16/24 Analyzed: 09/18/24

Boron 5.40 2.00 mg/L 5.00 108 80-120

Duplicate (BHI0492-DUP1)

Source: 2409173-01

Prepared: 09/16/24 Analyzed: 09/17/24

Boron 0.474 2.00 mg/L 0.497 4.86 20

Matrix Spike (BHI0492-MS1)

Source: 2409173-01

Prepared: 09/16/24 Analyzed: 09/17/24

Boron 5.57 2.00 mg/L 5.02 0.497 101 75-125

Matrix Spike Dup (BHI0492-MSD1)

Source: 2409173-01

Prepared: 09/16/24 Analyzed: 09/17/24

Boron 5.45 2.00 mg/L 5.02 0.497 98.7 75-125 2.10 25

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
Project Manager: Paul Henchan

Reported:
09/23/24 08:40

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHI0483 - EPA 3050B

Blank (BHI0483-BLK1)

Prepared: 09/16/24 Analyzed: 09/18/24

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 (BHI0483-BS1)

Prepared: 09/16/24 Analyzed: 09/19/24

Arsenic	39.2	0.200	mg/kg wet	37.9	103	80-120				
Barium	38.5	0.400	"	37.9	102	80-120				
Cadmium	1.90	0.200	"	1.89	100	80-120				
Copper	39.1	0.400	"	37.9	103	80-120				
Lead	19.7	0.200	"	18.9	104	80-120				
Nickel	38.8	0.400	"	37.9	103	80-120				
Silver	1.95	0.0200	"	1.89	103	80-120				
Zinc	39.0	0.400	"	37.9	103	80-120				
Selenium	3.66	0.260	"	3.79	96.5	80-120				

Duplicate (BHI0483-DUP1)

Source: 2409193-01

Prepared: 09/16/24 Analyzed: 09/18/24

Arsenic	0.838	0.200	mg/kg dry	0.728		14.1	20			
Barium	26.2	0.400	"	21.4		19.9	20			
Cadmium	0.0147	0.200	"	0.0192		26.2	20			QR-01
Copper	1.27	0.400	"	1.49		16.4	20			
Lead	4.07	0.200	"	5.28		25.9	20			QR-04
Nickel	1.68	0.400	"	1.90		12.1	20			
Silver	0.421	0.0200	"	0.552		27.0	20			QR-04
Zinc	10.3	0.400	"	10.2		0.188	20			
Selenium	ND	0.260	"	ND			20			

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Wellington CO, 80549

Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
Project Manager: Paul Henchan

Reported:
09/23/24 08:40

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 BHI0483 - EPA 3050B

Matrix Spike (BHI0483-MS1)	Source: 2409193-01			Prepared: 09/16/24		Analyzed: 09/18/24					
Arsenic	18.0	0.200	mg/kg dry	46.4	0.728	37.3	75-125				QM-05
Barium	76.9	0.400	"	46.4	21.4	120	75-125				
Cadmium	2.20	0.200	"	2.32	0.0192	94.0	75-125				
Copper	18.7	0.400	"	46.4	1.49	37.1	75-125				QM-05
Lead	26.1	0.200	"	23.2	5.28	89.5	75-125				
Nickel	19.0	0.400	"	46.4	1.90	36.9	75-125				QM-05
Silver	2.53	0.0200	"	2.32	0.552	85.4	75-125				
Zinc	25.5	0.400	"	46.4	10.2	32.8	75-125				QM-05
Selenium	4.94	0.260	"	4.64	ND	106	75-125				

Matrix Spike Dup (BHI0483-MSD1)	Source: 2409193-01			Prepared: 09/16/24		Analyzed: 09/18/24					
Arsenic	19.4	0.200	mg/kg dry	46.8	0.728	39.9	75-125	7.36	25		QM-05
Barium	69.2	0.400	"	46.8	21.4	102	75-125	10.5	25		
Cadmium	2.33	0.200	"	2.34	0.0192	98.7	75-125	5.62	25		
Copper	20.0	0.400	"	46.8	1.49	39.6	75-125	6.62	25		QM-05
Lead	26.9	0.200	"	23.4	5.28	92.4	75-125	3.16	25		
Nickel	20.3	0.400	"	46.8	1.90	39.4	75-125	6.62	25		QM-05
Silver	2.61	0.0200	"	2.34	0.552	88.0	75-125	2.98	25		
Zinc	27.6	0.400	"	46.8	10.2	37.0	75-125	7.95	25		QM-05
Selenium	5.12	0.260	"	4.68	ND	110	75-125	3.70	25		

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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 BHI0541 - 3060A Mod

Blank (BHI0541-BLK1)		Prepared & Analyzed: 09/17/24									
Chromium, Hexavalent	ND	0.30	mg/kg wet								
LCS (BHI0541-BS1)		Prepared & Analyzed: 09/17/24									
Chromium, Hexavalent	26.8	0.30	mg/kg wet	25.0	107	80-120					
Duplicate (BHI0541-DUP1)		Source: 2409193-01		Prepared & Analyzed: 09/17/24							
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
Matrix Spike (BHI0541-MS1)		Source: 2409193-01		Prepared & Analyzed: 09/17/24							
Chromium, Hexavalent	30.6	0.30	mg/kg dry	29.7	ND	103	75-125				
Matrix Spike Dup (BHI0541-MSD1)		Source: 2409193-01		Prepared & Analyzed: 09/17/24							
Chromium, Hexavalent	30.4	0.30	mg/kg dry	29.7	ND	102	75-125	0.584		20	

Summit Scientific

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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 BHI0565 - General Preparation

Blank (BHI0565-BLK1)

Prepared: 09/17/24 Analyzed: 09/19/24

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

LCS (BHI0565-BS1)

Prepared: 09/17/24 Analyzed: 09/19/24

Calcium	5.77	0.0500	mg/L wet	5.00	115	70-130				
Magnesium	5.15	0.0500	"	5.00	103	70-130				
Sodium	5.22	0.0500	"	5.00	104	70-130				

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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 BHI0497 - General Preparation

Duplicate (BHI0497-DUP1)

Source: 2409194-01

Prepared: 09/16/24 Analyzed: 09/18/24

% Solids	91.9		%		91.3			0.758		20	
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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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 BHI0616 - General Preparation

Blank (BHI0616-BLK1)

Prepared: 09/18/24 Analyzed: 09/19/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHI0616-BS1)

Prepared: 09/18/24 Analyzed: 09/19/24

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BHI0616-DUP1)

Source: 2409199-01

Prepared: 09/18/24 Analyzed: 09/19/24

Specific Conductance (EC) 0.120 0.0100 mmhos/cm 0.120 0.00 20

Summit Scientific

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
 Project Manager: Paul Henchan

Reported:
 09/23/24 08:40

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 BHI0617 - General Preparation

LCS (BHI0617-BS1)

Prepared: 09/18/24 Analyzed: 09/19/24

pH 9.11 pH Units 9.18 99.2 95-105

Duplicate (BHI0617-DUP1)

Source: 2409199-01

Prepared: 09/18/24 Analyzed: 09/19/24

pH 8.43 pH Units 8.47 0.473 20

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Project: Noble - Ocoma C17-15/TB (Background)

Project Number: UWRWE-A2638-ABN
Project Manager: Paul Henchan

Reported:
09/23/24 08:40

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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