

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 11, 2025

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Oster 27-11G Flowline
Work Order #2412229

Enclosed are the results of analyses for samples received by Summit Scientific on 12/11/24 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 - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121

Project Manager: Paul Henchan

Reported:
02/11/25 08:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL02 5Ft (2)	2412229-01	Soil	12/11/24 10:30	12/11/24 16:30
BKG01 3Ft	2412229-02	Soil	12/11/24 11:00	12/11/24 16:30
BKG02 3Ft	2412229-03	Soil	12/11/24 11:30	12/11/24 16:30
BKG03 3Ft	2412229-04	Soil	12/11/24 12:00	12/11/24 16:30
BKG04 3Ft	2412229-05	Soil	12/11/24 12:30	12/11/24 16:30
BKG05 3Ft	2412229-06	Soil	12/11/24 13:00	12/11/24 16:30
BKG01 5Ft	2412229-07	Soil	12/11/24 13:30	12/11/24 16:30
BKG02 5Ft	2412229-08	Soil	12/11/24 14:00	12/11/24 16:30
BKG03 5Ft	2412229-09	Soil	12/11/24 14:30	12/11/24 16:30
BKG04 5Ft	2412229-10	Soil	12/11/24 14:15	12/11/24 16:30
BKG05 5Ft	2412229-11	Soil	12/11/24 14:30	12/11/24 16:30

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

Lab ID: 2412229 Page 1 of 1

Client: Fremont Environmental	Send Data To: Project Manager: <u>Paul Henehan</u>	Send Invoice To: Company: <u>Noble (Chevron)</u>
Address: 8305 6th St.	E-Mail: <u>Chevron Dist. List, PDC Dist List, Civitas Dist List, Fremont Dist List: (PaulH), mikeG,</u>	Project Name/Location: <u></u>
City/State/Zip: Wellington, CO	<u>nickL, (ethanB), jeffG, chrisL, stanG, aaronO, joshB, (jordanS), tammyA (@fremontenv.com)</u>	AFE#: <u></u>
Phone: <u>864-423-2068</u>	Project Name: <u>Noble-Oster 27-116 Flowline</u>	PO/Billing Codes: <u>UWRWE-A2471-ABN</u>
Sampler Name: <u>Jordan Suttles</u>	Project Number: <u>C023-121</u>	Contact: <u>Dan Peterson</u>

Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions
				HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Full Table 915-1 (Soil)	Full Table 915-1 (GW)	Full Table 915-1 Metals	Full Table 915-1 Inorganics	
FLO2 5 FT(2)	12/11/24	10:30	2			X				X						
BKG01 3 FT		11:00											X	X		
BKG02 3 FT		11:30														
BKG03 3 FT		12:00														
BKG04 3 FT		12:30														
BKG05 3 FT		13:00														
BKG01 5 FT		13:30														
BKG02 5 FT		14:00														
BKG03 5 FT		14:30														
BKG04 5 FT		15:03:15														
BKG05 5 FT		15:14:30														

Relinquished by: <u>Jordan Suttles</u>	Date/Time: <u>12/11/24 15:15</u>	Received by: <u>S2-North office</u>	Date/Time: <u>12/11/24 15:15</u>	TAT Business Days	Field DO	Notes: Dist. Report to parties circled in the email line(s) only.
Relinquished by: <u>SL</u>	Date/Time: <u>12/11/24 1630</u>	Received by: <u>[Signature]</u>	Date/Time: <u>12/11/24 1630</u>	Same Day	Field EC	
Relinquished by: <u></u>	Date/Time: <u></u>	Received by: <u></u>	Date/Time: <u></u>	1 Day	Field ORP	
Relinquished by: <u></u>	Date/Time: <u></u>	Received by: <u></u>	Date/Time: <u></u>	2 Days	Field pH	
Relinquished by: <u></u>	Date/Time: <u></u>	Received by: <u></u>	Date/Time: <u></u>	3 Days	Field Temp.	
Relinquished by: <u></u>	Date/Time: <u></u>	Received by: <u></u>	Date/Time: <u></u>	Standard	Field Turb.	
Temperature Upon Receipt: <u>S-7</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #: <u></u>			

S₂

Sample Receipt Checklist

S2 Work Order# 2412229

Client: Freemant Client Project ID: Noble-Oster 27-11G Flowline

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

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

Temp (°C) 5.7

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

AS
Custodian Printed Name

12/11/24
Date/Time

000002



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

FL02 5Ft (2)
2412229-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHL1082	12/23/24	12/28/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	99.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHL1088	12/23/24	12/26/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	15.4	123 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL02 5Ft (2)
2412229-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHL0996	12/20/24	12/22/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0298	89.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0340	102 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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02/11/25 08:31

FL02 5Ft (2)
2412229-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.90	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	85.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.48	0.400	"	"	"	"	"	"	
Lead	5.98	0.200	"	"	"	"	"	"	
Nickel	6.68	0.400	"	"	"	"	"	"	
Silver	0.0557	0.0200	"	"	"	"	"	"	
Zinc	24.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.4	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	13.1	0.0500	"	"	"	"	"	"	
Sodium	76.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.41	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 Project Manager: Paul Henchan

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FL02 5Ft (2)
2412229-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.945	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.21		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG01 3Ft
2412229-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.50	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	96.3	0.400	"	"	"	"	"	"	
Cadmium	0.312	0.200	"	"	"	"	"	"	
Copper	10.6	0.400	"	"	"	"	"	"	
Lead	9.78	0.200	"	"	"	"	"	"	
Nickel	10.6	0.400	"	"	"	"	"	"	
Silver	0.0878	0.0200	"	"	"	"	"	"	
Zinc	42.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	40.5	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	8.22	0.0500	"	"	"	"	"	"	
Sodium	123	0.0500	"	"	"	"	"	"	

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 02/11/25 08:31

BKG01 3Ft
2412229-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.61	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.7		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.07	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.26		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG02 3Ft
2412229-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.44	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	135	0.400	"	"	"	"	"	"	
Cadmium	0.536	0.200	"	"	"	"	"	"	
Copper	13.1	0.400	"	"	"	"	"	"	
Lead	13.4	0.200	"	"	"	"	"	"	
Nickel	11.9	0.400	"	"	"	"	"	"	
Silver	0.0902	0.0200	"	"	"	"	"	"	
Zinc	53.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	11.7	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	2.70	0.0500	"	"	"	"	"	"	
Sodium	28.4	0.0500	"	"	"	"	"	"	

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 02/11/25 08:31

BKG02 3Ft
2412229-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.95	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.444	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.25		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG03 3Ft
2412229-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.86	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	182	0.400	"	"	"	"	"	"	
Cadmium	0.734	0.200	"	"	"	"	"	"	
Copper	18.0	0.400	"	"	"	"	"	"	
Lead	15.3	0.200	"	"	"	"	"	"	
Nickel	15.9	0.400	"	"	"	"	"	"	
Silver	0.0794	0.0200	"	"	"	"	"	"	
Zinc	77.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	13.5	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	2.89	0.0500	"	"	"	"	"	"	
Sodium	8.75	0.0500	"	"	"	"	"	"	

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 Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG03 3Ft
2412229-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.564	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.170	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.18		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG04 3Ft
2412229-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.18	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	74.2	0.400	"	"	"	"	"	"	
Cadmium	0.288	0.200	"	"	"	"	"	"	
Copper	7.38	0.400	"	"	"	"	"	"	
Lead	8.64	0.200	"	"	"	"	"	"	
Nickel	6.45	0.400	"	"	"	"	"	"	
Silver	0.0648	0.0200	"	"	"	"	"	"	
Zinc	31.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	20.8	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	3.35	0.0500	"	"	"	"	"	"	
Sodium	10.5	0.0500	"	"	"	"	"	"	

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG04 3Ft
2412229-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.564	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.8		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.355	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG05 3Ft
2412229-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.21	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	80.4	0.400	"	"	"	"	"	"	
Cadmium	0.308	0.200	"	"	"	"	"	"	
Copper	7.94	0.400	"	"	"	"	"	"	
Lead	8.65	0.200	"	"	"	"	"	"	
Nickel	9.12	0.400	"	"	"	"	"	"	
Silver	0.0762	0.0200	"	"	"	"	"	"	
Zinc	38.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	28.2	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	4.12	0.0500	"	"	"	"	"	"	
Sodium	9.31	0.0500	"	"	"	"	"	"	

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline
Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG05 3Ft
2412229-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.433	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.5		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.389	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG01 5Ft
2412229-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.39	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	131	0.400	"	"	"	"	"	"	
Cadmium	0.305	0.200	"	"	"	"	"	"	
Copper	9.14	0.400	"	"	"	"	"	"	
Lead	7.24	0.200	"	"	"	"	"	"	
Nickel	10.1	0.400	"	"	"	"	"	"	
Silver	0.0567	0.0200	"	"	"	"	"	"	
Zinc	31.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	102	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	17.6	0.0500	"	"	"	"	"	"	
Sodium	133	0.0500	"	"	"	"	"	"	

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 Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline
 Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG01 5Ft
2412229-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.20	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.51	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG02 5Ft
2412229-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.25	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	142	0.400	"	"	"	"	"	"	
Cadmium	0.448	0.200	"	"	"	"	"	"	
Copper	12.4	0.400	"	"	"	"	"	"	
Lead	11.5	0.200	"	"	"	"	"	"	
Nickel	11.2	0.400	"	"	"	"	"	"	
Silver	0.0678	0.0200	"	"	"	"	"	"	
Zinc	51.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	13.9	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	3.20	0.0500	"	"	"	"	"	"	
Sodium	11.6	0.0500	"	"	"	"	"	"	

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Project: Noble - Oster 27-11G Flowline
 Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG02 5Ft
2412229-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.729	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.8		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.272	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG03 5Ft
2412229-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.54	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	210	0.400	"	"	"	"	"	"	
Cadmium	0.746	0.200	"	"	"	"	"	"	
Copper	17.4	0.400	"	"	"	"	"	"	
Lead	15.7	0.200	"	"	"	"	"	"	
Nickel	15.2	0.400	"	"	"	"	"	"	
Silver	0.0828	0.0200	"	"	"	"	"	"	
Zinc	77.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	12.1	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	2.58	0.0500	"	"	"	"	"	"	
Sodium	6.87	0.0500	"	"	"	"	"	"	

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG03 5Ft
2412229-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.468	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.3		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.107	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.29		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG04 5Ft
2412229-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.21	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	74.0	0.400	"	"	"	"	"	"	
Cadmium	0.304	0.200	"	"	"	"	"	"	
Copper	7.48	0.400	"	"	"	"	"	"	
Lead	8.29	0.200	"	"	"	"	"	"	
Nickel	6.45	0.400	"	"	"	"	"	"	
Silver	0.0659	0.0200	"	"	"	"	"	"	
Zinc	31.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	20.3	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	3.44	0.0500	"	"	"	"	"	"	
Sodium	9.58	0.0500	"	"	"	"	"	"	

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Reported:
 02/11/25 08:31

BKG04 5Ft
2412229-10 (Soil)

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Calculated Analysis

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.518	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.329	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

BKG05 5Ft
2412229-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIB0031	02/03/25	02/06/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.15	0.200	mg/kg dry	1	BIB0161	02/05/25	02/10/25	EPA 6020B	
Barium	70.8	0.400	"	"	"	"	"	"	
Cadmium	0.299	0.200	"	"	"	"	"	"	
Copper	7.02	0.400	"	"	"	"	"	"	
Lead	8.61	0.200	"	"	"	"	"	"	
Nickel	5.70	0.400	"	"	"	"	"	"	
Silver	0.0658	0.0200	"	"	"	"	"	"	
Zinc	32.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0326	01/08/25	01/15/25	EPA 7196A	

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

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	17.7	0.0500	mg/L dry	1	BIA0256	01/07/25	01/13/25	EPA 6020B	
Magnesium	2.98	0.0500	"	"	"	"	"	"	
Sodium	8.14	0.0500	"	"	"	"	"	"	

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Project: Noble - Oster 27-11G Flowline
 Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

BKG05 5Ft
2412229-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.471	0.00100	units	1	BIA0598	01/14/25	01/14/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BIA0150	01/06/25	01/07/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.233	0.0100	mmhos/cm	1	BIA0249	01/07/25	01/13/25	EPA 120.1	

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

Date Sampled: **12/11/24 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BIA0239	01/07/25	01/13/25	EPA 9045D	

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHL1082 - EPA 5030 Soil MS

Blank (BHL1082-BLK1)

Prepared: 12/23/24 Analyzed: 12/27/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150				
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.1	50-150				

LCS (BHL1082-BS1)

Prepared: 12/23/24 Analyzed: 12/27/24

Benzene	0.0962	0.0020	mg/kg	0.100		96.2	70-130				
Toluene	0.0960	0.0050	"	0.100		96.0	70-130				
Ethylbenzene	0.0955	0.0050	"	0.100		95.5	70-130				
m,p-Xylene	0.191	0.010	"	0.200		95.7	70-130				
o-Xylene	0.0945	0.0050	"	0.100		94.5	70-130				
1,2,4-Trimethylbenzene	0.0923	0.0050	"	0.100		92.3	70-130				
1,3,5-Trimethylbenzene	0.0918	0.0050	"	0.100		91.8	70-130				
Naphthalene	0.106	0.0038	"	0.100		106	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0436		"	0.0400		109	50-150				
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	50-150				
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150				

Matrix Spike (BHL1082-MS1)

Source: 2412191-25

Prepared: 12/23/24 Analyzed: 12/27/24

Benzene	0.0928	0.0020	mg/kg	0.100	ND	92.8	70-130				
Toluene	0.0911	0.0050	"	0.100	ND	91.1	70-130				
Ethylbenzene	0.0887	0.0050	"	0.100	ND	88.7	70-130				
m,p-Xylene	0.179	0.010	"	0.200	ND	89.6	70-130				
o-Xylene	0.0868	0.0050	"	0.100	ND	86.8	70-130				
1,2,4-Trimethylbenzene	0.0836	0.0050	"	0.100	ND	83.6	70-130				
1,3,5-Trimethylbenzene	0.0845	0.0050	"	0.100	ND	84.5	70-130				
Naphthalene	0.0940	0.0038	"	0.100	ND	94.0	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	50-150				
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150				
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	50-150				

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 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BHL1082 - EPA 5030 Soil MS

Matrix Spike Dup (BHL1082-MSD1)	Source: 2412191-25			Prepared: 12/23/24 Analyzed: 12/27/24						
Benzene	0.0903	0.0020	mg/kg	0.100	ND	90.3	70-130	2.78	30	
Toluene	0.0893	0.0050	"	0.100	ND	89.3	70-130	1.96	30	
Ethylbenzene	0.0875	0.0050	"	0.100	ND	87.5	70-130	1.33	30	
m,p-Xylene	0.178	0.010	"	0.200	ND	88.8	70-130	0.925	30	
o-Xylene	0.0869	0.0050	"	0.100	ND	86.9	70-130	0.207	30	
1,2,4-Trimethylbenzene	0.0844	0.0050	"	0.100	ND	84.4	70-130	0.929	30	
1,3,5-Trimethylbenzene	0.0833	0.0050	"	0.100	ND	83.3	70-130	1.36	30	
Naphthalene	0.0898	0.0038	"	0.100	ND	89.8	70-130	4.64	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0428</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			

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Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHL1088 - EPA 3550A

Blank (BHL1088-BLK1)

Prepared: 12/23/24 Analyzed: 12/26/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	16.3		"	12.5		131		30-150			

LCS (BHL1088-BS1)

Prepared: 12/23/24 Analyzed: 12/26/24

C10-C28 (DRO)	525	50	mg/kg	500		105		70-130			
Surrogate: <i>o</i> -Terphenyl	17.7		"	12.5		142		30-150			

Matrix Spike (BHL1088-MS1)

Source: 2412191-25

Prepared: 12/23/24 Analyzed: 12/26/24

C10-C28 (DRO)	572	50	mg/kg	500	ND	114		70-130			
Surrogate: <i>o</i> -Terphenyl	12.9		"	12.5		103		30-150			

Matrix Spike Dup (BHL1088-MSD1)

Source: 2412191-25

Prepared: 12/23/24 Analyzed: 12/26/24

C10-C28 (DRO)	578	50	mg/kg	500	ND	116		70-130	1.15	20	
Surrogate: <i>o</i> -Terphenyl	14.7		"	12.5		118		30-150			

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Project Manager: Paul Henchan

Reported:
02/11/25 08:31

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHL0996 - EPA 5030 Soil MS

Blank (BHL0996-BLK1)

Prepared: 12/20/24 Analyzed: 12/22/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0261		"	0.0333		78.3	40-140			
Surrogate: Fluoranthene-d10	0.0272		"	0.0333		81.7	40-140			

LCS (BHL0996-BS1)

Prepared: 12/20/24 Analyzed: 12/22/24

Acenaphthene	0.0322	0.00500	mg/kg	0.0333		96.5	40-140			
Anthracene	0.0300	0.00500	"	0.0333		90.1	40-140			
Benzo (a) anthracene	0.0298	0.00500	"	0.0333		89.3	40-140			
Benzo (a) pyrene	0.0262	0.00500	"	0.0333		78.5	40-140			
Benzo (b) fluoranthene	0.0298	0.00500	"	0.0333		89.5	40-140			
Benzo (k) fluoranthene	0.0316	0.00500	"	0.0333		94.7	40-140			
Chrysene	0.0347	0.00500	"	0.0333		104	40-140			
Dibenz (a,h) anthracene	0.0199	0.00500	"	0.0333		59.7	40-140			
Fluoranthene	0.0367	0.00500	"	0.0333		110	40-140			
Fluorene	0.0370	0.00500	"	0.0333		111	40-140			
Indeno (1,2,3-cd) pyrene	0.0228	0.00500	"	0.0333		68.4	40-140			
Pyrene	0.0360	0.00500	"	0.0333		108	40-140			
1-Methylnaphthalene	0.0307	0.00500	"	0.0333		92.2	40-140			
2-Methylnaphthalene	0.0317	0.00500	"	0.0333		95.0	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0322		"	0.0333		96.6	40-140			
Surrogate: Fluoranthene-d10	0.0375		"	0.0333		112	40-140			

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHL0996 - EPA 5030 Soil MS

Matrix Spike (BHL0996-MS1)	Source: 2412191-25			Prepared: 12/20/24 Analyzed: 12/23/24							
Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.8	40-140				
Anthracene	0.0193	0.00500	"	0.0333	ND	57.8	40-140				
Benzo (a) anthracene	0.0204	0.00500	"	0.0333	ND	61.2	40-140				
Benzo (a) pyrene	0.0160	0.00500	"	0.0333	ND	48.0	40-140				
Benzo (b) fluoranthene	0.0185	0.00500	"	0.0333	ND	55.4	40-140				
Benzo (k) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.2	40-140				
Chrysene	0.0218	0.00500	"	0.0333	ND	65.5	40-140				
Dibenz (a,h) anthracene	0.0212	0.00500	"	0.0333	ND	63.7	40-140				
Fluoranthene	0.0267	0.00500	"	0.0333	ND	80.2	40-140				
Fluorene	0.0243	0.00500	"	0.0333	ND	73.0	40-140				
Indeno (1,2,3-cd) pyrene	0.0242	0.00500	"	0.0333	ND	72.6	40-140				
Pyrene	0.0272	0.00500	"	0.0333	ND	81.6	40-140				
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	62.9	40-140				
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.4	40-140				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0216</i>		<i>"</i>	<i>0.0333</i>		<i>64.9</i>	<i>40-140</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0269</i>		<i>"</i>	<i>0.0333</i>		<i>80.7</i>	<i>40-140</i>				

Matrix Spike Dup (BHL0996-MSD1)	Source: 2412191-25			Prepared: 12/20/24 Analyzed: 12/22/24							
Acenaphthene	0.0235	0.00500	mg/kg	0.0333	ND	70.4	40-140	1.99	30		
Anthracene	0.0216	0.00500	"	0.0333	ND	64.9	40-140	11.6	30		
Benzo (a) anthracene	0.0227	0.00500	"	0.0333	ND	68.1	40-140	10.7	30		
Benzo (a) pyrene	0.0184	0.00500	"	0.0333	ND	55.3	40-140	14.1	30		
Benzo (b) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.5	40-140	8.83	30		
Benzo (k) fluoranthene	0.0193	0.00500	"	0.0333	ND	58.0	40-140	4.95	30		
Chrysene	0.0204	0.00500	"	0.0333	ND	61.1	40-140	7.03	30		
Dibenz (a,h) anthracene	0.0239	0.00500	"	0.0333	ND	71.7	40-140	11.8	30		
Fluoranthene	0.0263	0.00500	"	0.0333	ND	79.0	40-140	1.56	30		
Fluorene	0.0282	0.00500	"	0.0333	ND	84.7	40-140	14.8	30		
Indeno (1,2,3-cd) pyrene	0.0204	0.00500	"	0.0333	ND	61.3	40-140	16.8	30		
Pyrene	0.0195	0.00500	"	0.0333	ND	58.4	40-140	33.1	30		QR-02
1-Methylnaphthalene	0.0224	0.00500	"	0.0333	ND	67.2	40-140	6.54	30		
2-Methylnaphthalene	0.0226	0.00500	"	0.0333	ND	67.9	40-140	5.26	30		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0215</i>		<i>"</i>	<i>0.0333</i>		<i>64.4</i>	<i>40-140</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0268</i>		<i>"</i>	<i>0.0333</i>		<i>80.3</i>	<i>40-140</i>				

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIB0031 - EPA 3050B

Blank (BIB0031-BLK1)

Prepared: 02/03/25 Analyzed: 02/06/25

Boron ND 2.00 mg/L

LCS (BIB0031-BS1)

Prepared: 02/03/25 Analyzed: 02/06/25

Boron 4.70 2.00 mg/L 5.00 94.0 80-120

Duplicate (BIB0031-DUP1)

Source: 2412229-01

Prepared: 02/03/25 Analyzed: 02/06/25

Boron 0.234 2.00 mg/L 0.301 25.2 20 QR-01

Matrix Spike (BIB0031-MS1)

Source: 2412229-01

Prepared: 02/03/25 Analyzed: 02/06/25

Boron 4.57 2.00 mg/L 5.01 0.301 85.3 75-125

Matrix Spike Dup (BIB0031-MSD1)

Source: 2412229-01

Prepared: 02/03/25 Analyzed: 02/06/25

Boron 4.65 2.00 mg/L 5.01 0.301 87.0 75-125 1.84 25

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

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 BIB0161 - EPA 3050B

Blank (BIB0161-BLK1)

Prepared: 02/05/25 Analyzed: 02/10/25

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 (BIB0161-BS1)

Prepared: 02/05/25 Analyzed: 02/10/25

Arsenic	42.8	0.200	mg/kg wet	41.0	104	80-120
Barium	43.1	0.400	"	41.0	105	80-120
Cadmium	2.26	0.200	"	2.05	110	80-120
Copper	46.1	0.400	"	41.0	113	80-120
Lead	22.4	0.200	"	20.5	109	80-120
Nickel	42.8	0.400	"	41.0	104	80-120
Silver	2.25	0.0200	"	2.05	110	80-120
Zinc	43.7	0.400	"	41.0	107	80-120
Selenium	3.96	0.260	"	4.10	96.6	80-120

Duplicate (BIB0161-DUP1)

Source: 2412225-20

Prepared: 02/05/25 Analyzed: 02/10/25

Arsenic	4.33	0.200	mg/kg dry	4.03	7.24	20	
Barium	230	0.400	"	181	24.1	20	QR-04
Cadmium	0.341	0.200	"	0.295	14.4	20	
Copper	14.9	0.400	"	12.7	16.2	20	
Lead	12.0	0.200	"	10.8	10.8	20	
Nickel	14.2	0.400	"	13.0	9.16	20	
Silver	0.0564	0.0200	"	0.0472	17.9	20	
Zinc	60.7	0.400	"	52.2	15.1	20	
Selenium	ND	0.260	"	ND		20	

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 Wellington CO, 80549

Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIB0161 - EPA 3050B

Matrix Spike (BIB0161-MS1)	Source: 2412225-20			Prepared: 02/05/25 Analyzed: 02/10/25								
Arsenic	54.0	0.200	mg/kg dry	47.9	4.03	105	75-125					
Barium	258	0.400	"	47.9	181	161	75-125					QM-05
Cadmium	2.98	0.200	"	2.39	0.295	112	75-125					
Copper	69.2	0.400	"	47.9	12.7	118	75-125					
Lead	38.8	0.200	"	23.9	10.8	117	75-125					
Nickel	64.2	0.400	"	47.9	13.0	107	75-125					
Silver	2.64	0.0200	"	2.39	0.0472	108	75-125					
Zinc	110	0.400	"	47.9	52.2	121	75-125					
Selenium	3.58	0.260	"	4.79	ND	74.8	75-125					QM-05

Matrix Spike Dup (BIB0161-MSD1)	Source: 2412225-20			Prepared: 02/05/25 Analyzed: 02/10/25								
Arsenic	54.1	0.200	mg/kg dry	47.9	4.03	105	75-125	0.0850	25			
Barium	224	0.400	"	47.9	181	89.6	75-125	14.1	25			
Cadmium	2.96	0.200	"	2.39	0.295	112	75-125	0.548	25			
Copper	67.9	0.400	"	47.9	12.7	115	75-125	1.88	25			
Lead	38.1	0.200	"	23.9	10.8	114	75-125	1.77	25			
Nickel	63.6	0.400	"	47.9	13.0	106	75-125	0.880	25			
Silver	2.63	0.0200	"	2.39	0.0472	108	75-125	0.345	25			
Zinc	108	0.400	"	47.9	52.2	116	75-125	2.02	25			
Selenium	3.54	0.260	"	4.79	ND	74.0	75-125	1.10	25			QM-05

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIA0326 - 3060A Mod

Blank (BIA0326-BLK1)

Prepared: 01/08/25 Analyzed: 01/15/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIA0326-BS1)

Prepared: 01/08/25 Analyzed: 01/15/25

Chromium, Hexavalent 24.7 0.30 mg/kg wet 25.8 95.8 80-120

Duplicate (BIA0326-DUP1)

Source: 2412229-01

Prepared: 01/08/25 Analyzed: 01/15/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIA0326-MS1)

Source: 2412229-01

Prepared: 01/08/25 Analyzed: 01/15/25

Chromium, Hexavalent 26.3 0.30 mg/kg dry 26.0 ND 101 75-125

Matrix Spike Dup (BIA0326-MSD1)

Source: 2412229-01

Prepared: 01/08/25 Analyzed: 01/15/25

Chromium, Hexavalent 27.6 0.30 mg/kg dry 28.0 ND 98.6 75-125 4.70 20

Summit Scientific

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIA0256 - General Preparation

Blank (BIA0256-BLK1)

Prepared: 01/07/25 Analyzed: 01/13/25

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

LCS (BIA0256-BS1)

Prepared: 01/07/25 Analyzed: 01/13/25

Calcium	5.70	0.0500	mg/L wet	5.00	114	70-130				
Magnesium	5.58	0.0500	"	5.00	112	70-130				
Sodium	5.83	0.0500	"	5.00	117	70-130				

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIA0150 - General Preparation

Duplicate (BIA0150-DUP1)

Source: 2412228-01

Prepared: 01/06/25 Analyzed: 01/07/25

% Solids	83.4		%		82.2			1.44		20	
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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIA0249 - General Preparation

Blank (BIA0249-BLK1)

Prepared: 01/07/25 Analyzed: 01/13/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIA0249-BS1)

Prepared: 01/07/25 Analyzed: 01/13/25

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BIA0249-DUP1)

Source: 2412229-01

Prepared: 01/07/25 Analyzed: 01/13/25

Specific Conductance (EC) 0.935 0.0100 mmhos/cm 0.945 0.989 20

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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
 Project Manager: Paul Henchan

Reported:
 02/11/25 08:31

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 BIA0239 - General Preparation

LCS (BIA0239-BS1)

Prepared: 01/07/25 Analyzed: 01/13/25

pH	9.10	pH Units	9.18	99.1	95-105
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Duplicate (BIA0239-DUP1)

Source: 2412229-01

Prepared: 01/07/25 Analyzed: 01/13/25

pH	7.19	pH Units	7.21	0.278	20
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Project: Noble - Oster 27-11G Flowline

Project Number: UWRWE-A2471-ABN CO23-121
Project Manager: Paul Henchan

Reported:
02/11/25 08:31

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-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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