

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 02, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Farr T4N-R64W-S18 L01

Work Order #2407091

Enclosed are the results of analyses for samples received by Summit Scientific on 07/09/24 16:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B05@13.0'	2407091-01	Soil	07/09/24 00:00	07/09/24 16:39
S02@12.0'	2407091-02	Soil	07/09/24 00:00	07/09/24 16:39

#### Case Narrative

Rerun analyses were performed by client request on 7/24/2024.  
The rerun results included in this report are denoted with "RE#."

This is a revision of the report originally sent on 07/15/2024 at 07:52 MT.

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

# SUMMIT SCIENTIFIC

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

Lab ID	Page <u>1</u> of <u>1</u>
2407091	

Client: <u>Fremont Env</u>		Send Data To:		Send Invoice To:	
Address:		Project Manager: <u>Paul Henehan</u>		Company: <u>Noble</u>	
City/State/Zip:		E-Mail: <u>Paulh@fremontenv.com</u>		Project Name/Location:	
Phone:		<u>jeff@fremontenv.com Ethamb@fremontenv.com</u>		AFE#:	
Sampler Name: <u>JL</u>		Project Name: <u>Farr T4N-R64W-S18 L01</u>		PO/Billing Codes:	
		Project Number:		Contact:	

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX+N	TMBs (915)	DRO,ORO,GRO	PAHs (915)	EC,PH,SAR, Barba	Metals (915)			
1	B05@13.0'	7/9/24		2			XX			XX			XX	XX	XX	XX	XX	XX			
2	S02@12.0'	7/9/24		2			XX			XX			XX	XX	XX	XX	XX	XX			
3																					
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Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/9/24</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/9/24 16:39</u>	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	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: <u>26.1</u>		Corrected Temperature		IR gun #: <u>2</u>	HNO3 lot #:	

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2407091Client: Fremont - Noble Client Project ID: Farr T4N-R64W-S18 L01Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ ☐ ☐ ☐ ☐ Airbill #: \_\_\_\_\_

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

21.1

Thermometer #

2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>Same day</u>
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
AS  
Custodian Printed Name

7/9/24  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**B05@13.0'**  
**2407091-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHG0235	07/09/24	07/09/24	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: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0429	107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHG0238	07/09/24	07/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.69	69.5 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**B05@13.0'**  
**2407091-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0245	07/10/24	07/10/24	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: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	48.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0256	07/10/24	07/11/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henahan

**Reported:**  
08/02/24 14:42

**B05@13.0'**  
**2407091-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Barium	52.1	0.400	mg/kg dry	1	BHG0242	07/10/24	07/11/24	EPA 6020B
Cadmium	0.256	0.200	"	"	"	"	"	"
Copper	6.88	0.400	"	"	"	"	"	"
Lead	10.9	0.200	"	"	"	"	"	"
Nickel	5.93	0.400	"	"	"	"	"	"
Silver	0.0262	0.0200	"	"	"	"	"	"
Zinc	31.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0248	07/10/24	07/10/24	EPA 7196A	

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

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.1	0.0500	mg/L dry	1	BHG0239	07/09/24	07/10/24	EPA 6020B	
Magnesium	41.6	0.0500	"	"	"	"	"	"	
Sodium	98.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/09/24 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.75	0.00100	units	1	BHG0294	07/11/24	07/11/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.7		%	1	BHG0243	07/10/24	07/10/24	Calculation	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
08/02/24 14:42

**B05@13.0'**  
**2407091-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Specific Conductance (EC)	1.12	0.0100	mmhos/cm	1	BHG0241	07/09/24	07/10/24	EPA 120.1	

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

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
pH	8.33		pH Units	1	BHG0240	07/09/24	07/10/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**B05@13.0'**  
**2407091-01RE1 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.13	0.200		mg/kg dry	1	BHG0875	07/10/24	08/02/24	EPA 6020B	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**S02@12.0'**  
**2407091-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0235	07/09/24	07/09/24	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: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0429	107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0238	07/09/24	07/09/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.48	67.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**S02@12.0'**  
**2407091-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0245	07/10/24	07/10/24	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: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0256	07/10/24	07/11/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
08/02/24 14:42

**S02@12.0'**  
**2407091-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	15.7	0.200	mg/kg dry	1	BHG0242	07/10/24	07/11/24	EPA 6020B
Barium	210	0.400	"	"	"	"	"	"
Copper	8.94	0.400	"	"	"	"	"	"
Nickel	7.37	0.400	"	"	"	"	"	"
Silver	0.0287	0.0200	"	"	"	"	"	"
Zinc	26.3	0.400	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0248	07/10/24	07/10/24	EPA 7196A	

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

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	12.7	0.0500	mg/L dry	1	BHG0239	07/09/24	07/10/24	EPA 6020B	
Magnesium	36.6	0.0500	"	"	"	"	"	"	
Sodium	117	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.77	0.00100	units	1	BHG0294	07/11/24	07/11/24	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	1	BHG0243	07/10/24	07/10/24	Calculation	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**S02@12.0'**  
**2407091-02 (Soil)**

**Summit Scientific**

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.02	0.0100		mmhos/cm	1	BHG0241	07/09/24	07/10/24	EPA 120.1	

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

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.43			pH Units	1	BHG0240	07/09/24	07/10/24	EPA 9045D	

Summit Scientific

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**S02@12.0'**  
**2407091-02RE1 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **07/09/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Cadmium</b>	<b>0.503</b>	0.200	mg/kg dry	1	BHG0875	07/10/24	08/02/24	EPA 6020B	
<b>Lead</b>	<b>11.4</b>	0.200	"	"	"	"	"	"	
<b>Selenium</b>	<b>0.338</b>	0.260	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHG0235 - EPA 5030 Soil MS

##### Blank (BHG0235-BLK1)

Prepared: 07/09/24 Analyzed: 07/10/24

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	0.0429		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

##### LCS (BHG0235-BS1)

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	0.0873	0.0020	mg/kg	0.100		87.3	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130			
m,p-Xylene	0.198	0.010	"	0.200		99.1	70-130			
o-Xylene	0.0986	0.0050	"	0.100		98.6	70-130			
1,2,4-Trimethylbenzene	0.0937	0.0050	"	0.100		93.7	70-130			
1,3,5-Trimethylbenzene	0.0941	0.0050	"	0.100		94.1	70-130			
Naphthalene	0.0771	0.0038	"	0.100		77.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0340		"	0.0400		85.1	50-150			
Surrogate: Toluene-d8	0.0417		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	50-150			

##### Matrix Spike (BHG0235-MS1)

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

Benzene	0.0942	0.0020	mg/kg	0.100	ND	94.2	70-130			
Toluene	0.111	0.0050	"	0.100	ND	111	70-130			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130			
m,p-Xylene	0.203	0.010	"	0.200	ND	102	70-130			
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130			
1,2,4-Trimethylbenzene	0.0975	0.0050	"	0.100	ND	97.5	70-130			
1,3,5-Trimethylbenzene	0.0984	0.0050	"	0.100	ND	98.4	70-130			
Naphthalene	0.0793	0.0038	"	0.100	ND	79.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BHG0235 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0235-MSD1)		Source: 2407091-01			Prepared: 07/09/24 Analyzed: 07/10/24					
Benzene	0.0874	0.0020	mg/kg	0.100	ND	87.4	70-130	7.50	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	6.32	30	
Ethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130	2.21	30	
m,p-Xylene	0.196	0.010	"	0.200	ND	97.8	70-130	3.73	30	
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130	1.40	30	
1,2,4-Trimethylbenzene	0.0942	0.0050	"	0.100	ND	94.2	70-130	3.51	30	
1,3,5-Trimethylbenzene	0.0950	0.0050	"	0.100	ND	95.0	70-130	3.51	30	
Naphthalene	0.0797	0.0038	"	0.100	ND	79.7	70-130	0.528	30	
Surrogate: 1,2-Dichloroethane-d4		0.0396	"	0.0400		98.9	50-150			
Surrogate: Toluene-d8		0.0413	"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene		0.0394	"	0.0400		98.6	50-150			

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Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHG0238 - EPA 3550A**

**Blank (BHG0238-BLK1)**

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.3		"	12.5		106	30-150			

**LCS (BHG0238-BS1)**

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	530	50	mg/kg	500		106	70-130			
Surrogate: o-Terphenyl	11.8		"	12.5		94.4	30-150			

**Matrix Spike (BHG0238-MS1)**

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	518	50	mg/kg	500	9.81	102	70-130			
Surrogate: o-Terphenyl	9.64		"	12.5		77.1	30-150			

**Matrix Spike Dup (BHG0238-MSD1)**

Source: 2407091-01

Prepared: 07/09/24 Analyzed: 07/10/24

C10-C28 (DRO)	540	50	mg/kg	500	9.81	106	70-130	4.05	20	
Surrogate: o-Terphenyl	10.7		"	12.5		85.5	30-150			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHG0245 - EPA 5030 Soil MS

##### Blank (BHG0245-BLK1)

Prepared & Analyzed: 07/10/24

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	0.0152	"	0.0333	45.6	40-150
Surrogate: Fluoranthene-d10	0.0189	"	0.0333	56.6	40-150

##### LCS (BHG0245-BS1)

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0185	0.00500	mg/kg	0.0333	55.6	31-137
Anthracene	0.0177	0.00500	"	0.0333	53.2	30-120
Benzo (a) anthracene	0.0190	0.00500	"	0.0333	57.0	30-120
Benzo (a) pyrene	0.0174	0.00500	"	0.0333	52.3	30-120
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	52.4	30-120
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	54.7	30-120
Chrysene	0.0189	0.00500	"	0.0333	56.7	30-120
Dibenz (a,h) anthracene	0.0152	0.00500	"	0.0333	45.7	30-120
Fluoranthene	0.0190	0.00500	"	0.0333	56.9	30-120
Fluorene	0.0186	0.00500	"	0.0333	55.9	30-120
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	47.1	30-120
Pyrene	0.0213	0.00500	"	0.0333	63.8	35-142
1-Methylnaphthalene	0.0193	0.00500	"	0.0333	57.8	35-142
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	51.6	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0184	"	0.0333	55.1	40-150
Surrogate: Fluoranthene-d10	0.0205	"	0.0333	61.6	40-150

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BHG0245 - EPA 5030 Soil MS

##### Matrix Spike (BHG0245-MS1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0154	0.00500	mg/kg	0.0333	ND	46.1	31-137				
Anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120				
Benzo (a) anthracene	0.0157	0.00500	"	0.0333	ND	47.2	30-120				
Benzo (a) pyrene	0.0165	0.00500	"	0.0333	ND	49.5	30-120				
Benzo (b) fluoranthene	0.0168	0.00500	"	0.0333	ND	50.5	30-120				
Benzo (k) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.2	30-120				
Chrysene	0.0156	0.00500	"	0.0333	ND	46.8	30-120				
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.4	30-120				
Fluoranthene	0.0147	0.00500	"	0.0333	ND	44.1	30-120				
Fluorene	0.0158	0.00500	"	0.0333	ND	47.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0151	0.00500	"	0.0333	ND	45.3	30-120				
Pyrene	0.0172	0.00500	"	0.0333	ND	51.5	35-142				
1-Methylnaphthalene	0.0158	0.00500	"	0.0333	ND	47.5	15-130				
2-Methylnaphthalene	0.0151	0.00500	"	0.0333	ND	45.3	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0155		"	0.0333		46.6	40-150				
Surrogate: Fluoranthene-d10	0.0157		"	0.0333		47.1	40-150				

##### Matrix Spike Dup (BHG0245-MSD1)

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Acenaphthene	0.0164	0.00500	mg/kg	0.0333	ND	49.1	31-137	6.26	30		
Anthracene	0.0162	0.00500	"	0.0333	ND	48.5	30-120	9.65	30		
Benzo (a) anthracene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	3.25	30		
Benzo (a) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	3.37	30		
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	3.73	30		
Benzo (k) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	1.71	30		
Chrysene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	0.943	30		
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.9	30-120	6.07	30		
Fluoranthene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	11.1	30		
Fluorene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	6.99	30		
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.6	30-120	2.65	30		
Pyrene	0.0174	0.00500	"	0.0333	ND	52.1	35-142	1.11	30		
1-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	11.4	50		
2-Methylnaphthalene	0.0165	0.00500	"	0.0333	ND	49.5	15-130	8.79	50		
Surrogate: 2-Methylnaphthalene-d10	0.0171		"	0.0333		51.2	40-150				
Surrogate: Fluoranthene-d10	0.0175		"	0.0333		52.4	40-150				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

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

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

**Batch BHG0256 - EPA 3050B**

**Blank (BHG0256-BLK1)**

Prepared: 07/10/24 Analyzed: 07/11/24

Boron ND 2.00 mg/L

**LCS (BHG0256-BS1)**

Prepared: 07/10/24 Analyzed: 07/11/24

Boron 5.19 2.00 mg/L 5.00 104 80-120

**Duplicate (BHG0256-DUP1)**

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron 0.125 2.00 mg/L 0.149 17.8 20

**Matrix Spike (BHG0256-MS1)**

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron 7.23 2.00 mg/L 5.02 0.149 141 75-125 QM-07

**Matrix Spike Dup (BHG0256-MSD1)**

Source: 2407091-01

Prepared: 07/10/24 Analyzed: 07/11/24

Boron 5.39 2.00 mg/L 5.02 0.149 104 75-125 29.1 25 QM-07

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

### Total Metals by EPA 6020B - Quality Control

#### Summit Scientific

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

#### Batch BHG0242 - EPA 3050B

##### Blank (BHG0242-BLK1)

Prepared: 07/10/24 Analyzed: 07/11/24

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 (BHG0242-BS1)

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	35.0	0.200	mg/kg wet	40.0	87.5	80-120
Barium	37.2	0.400	"	40.0	92.9	80-120
Cadmium	1.88	0.200	"	2.00	93.8	80-120
Copper	37.5	0.400	"	40.0	93.8	80-120
Lead	18.6	0.200	"	20.0	93.2	80-120
Nickel	37.2	0.400	"	40.0	93.0	80-120
Silver	1.86	0.0200	"	2.00	93.1	80-120
Zinc	36.6	0.400	"	40.0	91.5	80-120
Selenium	3.99	0.260	"	4.00	99.8	80-120

##### Duplicate (BHG0242-DUP1)

Source: 2405469-13RE1

Prepared: 07/10/24 Analyzed: 07/11/24

Arsenic	5.41	0.200	mg/kg wet	5.48	1.36	20
Barium	113	0.400	"	92.4	19.9	20
Cadmium	0.211	0.200	"	0.235	10.7	20
Copper	5.47	0.400	"	5.65	3.25	20
Lead	9.70	0.200	"	9.52	1.86	20
Nickel	4.64	0.400	"	4.55	2.13	20
Silver	0.0742	0.0200	"	0.0770	3.62	20
Zinc	16.1	0.400	"	16.3	1.17	20
Selenium	ND	0.260	"	0.189	200	20

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHG0242 - EPA 3050B**

Matrix Spike (BHG0242-MS1)		Source: 2405469-13RE1			Prepared: 07/10/24 Analyzed: 07/11/24					
Arsenic	41.8	0.200	mg/kg wet	39.4	5.48	92.2	75-125			
Barium	124	0.400	"	39.4	92.4	81.2	75-125			
Cadmium	2.19	0.200	"	1.97	0.235	99.2	75-125			
Copper	24.9	0.400	"	39.4	5.65	48.9	75-125			QM-05
Lead	28.9	0.200	"	19.7	9.52	98.5	75-125			
Nickel	24.2	0.400	"	39.4	4.55	49.8	75-125			QM-05
Silver	1.94	0.0200	"	1.97	0.0770	94.7	75-125			
Zinc	36.3	0.400	"	39.4	16.3	51.0	75-125			QM-05
Selenium	3.99	0.260	"	3.94	0.189	96.4	75-125			

Matrix Spike Dup (BHG0242-MSD1)		Source: 2405469-13RE1			Prepared: 07/10/24 Analyzed: 07/11/24					
Arsenic	42.3	0.200	mg/kg wet	39.4	5.48	93.6	75-125	1.28	25	
Barium	125	0.400	"	39.4	92.4	81.6	75-125	0.117	25	
Cadmium	2.19	0.200	"	1.97	0.235	99.5	75-125	0.270	25	
Copper	25.1	0.400	"	39.4	5.65	49.4	75-125	0.696	25	QM-05
Lead	28.8	0.200	"	19.7	9.52	98.1	75-125	0.264	25	
Nickel	24.4	0.400	"	39.4	4.55	50.3	75-125	0.862	25	QM-05
Silver	1.96	0.0200	"	1.97	0.0770	95.5	75-125	0.849	25	
Zinc	36.4	0.400	"	39.4	16.3	51.2	75-125	0.223	25	QM-05
Selenium	3.97	0.260	"	3.94	0.189	96.1	75-125	0.356	25	

**Batch BHG0875 - EPA 3050B**

Blank (BHG0875-BLK1)		Prepared: 07/30/24 Analyzed: 08/02/24								
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	"							

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

### Total Metals by EPA 6020B - Quality Control

#### Summit Scientific

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

#### Batch BHG0875 - EPA 3050B

##### LCS (BHG0875-BS1)

Prepared: 07/30/24 Analyzed: 08/02/24

Arsenic	36.7	0.200	mg/kg wet	37.3		98.3	80-120			
Barium	35.3	0.400	"	37.3		94.5	80-120			
Cadmium	1.79	0.200	"	1.87		95.8	80-120			
Copper	37.2	0.400	"	37.3		99.7	80-120			
Lead	17.2	0.200	"	18.7		92.4	80-120			
Nickel	37.7	0.400	"	37.3		101	80-120			
Silver	1.79	0.0200	"	1.87		95.9	80-120			
Zinc	37.2	0.400	"	37.3		99.7	80-120			
Selenium	3.76	0.260	"	3.73		101	80-120			

##### Duplicate (BHG0875-DUP1)

Source: 2407031-01RE1

Prepared: 07/30/24 Analyzed: 08/02/24

Arsenic	2.94	0.200	mg/kg wet		3.08			4.67	20	
Barium	47.2	0.400	"		72.6			42.4	20	QR-02
Cadmium	0.158	0.200	"		0.165			4.32	20	
Copper	3.55	0.400	"		3.52			0.938	20	
Lead	7.00	0.200	"		7.11			1.60	20	
Nickel	4.17	0.400	"		4.15			0.461	20	
Silver	0.0109	0.0200	"		0.0103			5.63	20	
Zinc	16.6	0.400	"		16.5			0.526	20	
Selenium	ND	0.260	"		ND				20	

##### Matrix Spike (BHG0875-MS1)

Source: 2407031-01RE1

Prepared: 07/30/24 Analyzed: 08/02/24

Arsenic	37.2	0.200	mg/kg wet	36.8	3.08	92.8	75-125			
Barium	76.7	0.400	"	36.8	72.6	11.2	75-125			QM-07
Cadmium	1.69	0.200	"	1.84	0.165	82.7	75-125			
Copper	21.0	0.400	"	36.8	3.52	47.6	75-125			QM-05
Lead	23.8	0.200	"	18.4	7.11	91.0	75-125			
Nickel	21.9	0.400	"	36.8	4.15	48.2	75-125			QM-05
Silver	1.49	0.0200	"	1.84	0.0103	80.6	75-125			
Zinc	33.8	0.400	"	36.8	16.5	47.2	75-125			QM-05
Selenium	3.66	0.260	"	3.68	ND	99.5	75-125			

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BHG0875 - EPA 3050B**

**Matrix Spike Dup (BHG0875-MSD1)**

**Source: 2407031-01RE1**

Prepared: 07/30/24 Analyzed: 08/02/24

Arsenic	36.2	0.180	mg/kg wet	36.0	3.08	92.0	75-125	2.76	25	
Barium	73.7	0.360	"	36.0	72.6	3.10	75-125	3.97	25	QM-07
Cadmium	1.63	0.180	"	1.80	0.165	81.4	75-125	3.41	25	
Copper	20.9	0.360	"	36.0	3.52	48.2	75-125	0.873	25	QM-05
Lead	22.8	0.180	"	18.0	7.11	87.1	75-125	4.57	25	
Nickel	21.7	0.360	"	36.0	4.15	48.7	75-125	0.881	25	QM-05
Silver	1.48	0.0180	"	1.80	0.0103	81.4	75-125	1.15	25	
Zinc	33.4	0.360	"	36.0	16.5	47.1	75-125	1.24	25	QM-05
Selenium	3.50	0.234	"	3.60	ND	97.4	75-125	4.29	25	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BHG0248 - 3060A Mod**

**Blank (BHG0248-BLK1)**

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BHG0248-BS1)**

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

**Duplicate (BHG0248-DUP1)**

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BHG0248-MS1)**

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 30.3 0.30 mg/kg dry 29.5 ND 103 75-125

**Matrix Spike Dup (BHG0248-MSD1)**

Source: 2407091-01

Prepared & Analyzed: 07/10/24

Chromium, Hexavalent 29.5 0.30 mg/kg dry 29.5 ND 100 75-125 2.57 20

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

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

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

**Batch BHG0239 - General Preparation**

**Blank (BHG0239-BLK1)**

Prepared: 07/09/24 Analyzed: 07/10/24

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

**LCS (BHG0239-BS1)**

Prepared: 07/09/24 Analyzed: 07/10/24

Calcium	5.44	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.19	0.0500	"	5.00	104	70-130
Sodium	5.18	0.0500	"	5.00	104	70-130

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Fremont Environmental PO Box 1289 Wellington CO, 80549	Project: Noble - Farr T4N-R64W-S18 L01  Project Number: [none] Project Manager: Paul Henchan	Reported: 08/02/24 14:42
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

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

Batch BHG0243 - General Preparation

Duplicate (BHG0243-DUP1)		Source: 2407091-01			Prepared & Analyzed: 07/10/24					
% Solids	84.7		%		84.7			0.0176	20	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

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

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

**Batch BHG0241 - General Preparation**

**Blank (BHG0241-BLK1)**

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHG0241-BS1)**

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

**Duplicate (BHG0241-DUP1)**

**Source: 2407091-01**

Prepared: 07/09/24 Analyzed: 07/10/24

Specific Conductance (EC) 1.12 0.0100 mmhos/cm 1.12 0.358 20

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/02/24 14:42

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

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

**Batch BHG0240 - General Preparation**

**LCS (BHG0240-BS1)**

Prepared: 07/09/24 Analyzed: 07/10/24

pH	9.13		pH Units	9.18		99.5	95-105		
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**Duplicate (BHG0240-DUP1)**

**Source: 2407091-01**

Prepared: 07/09/24 Analyzed: 07/10/24

pH	8.34		pH Units		8.33			0.120	20
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**Batch BHG0786 - General Preparation**

**LCS (BHG0786-BS1)**

Prepared & Analyzed: 07/26/24

pH	9.08		pH Units	9.18		98.9	95-105		
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**Duplicate (BHG0786-DUP1)**

**Source: 2407343-01**

Prepared & Analyzed: 07/26/24

pH	8.05		pH Units		8.06			0.124	20
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PO Box 1289  
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Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
08/02/24 14:42

### Notes and Definitions

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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
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