

Summit Scientific

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 #2407049

Enclosed are the results of analyses for samples received by Summit Scientific on 07/03/24 14:38. 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 14:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03@13.0'	2407049-01	Soil	07/03/24 00:00	07/03/24 14:38
S01@12.0'	2407049-02	Soil	07/03/24 00:00	07/03/24 14:38
E02@12.0'	2407049-03	Soil	07/03/24 00:00	07/03/24 14:38

Case Narrative

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

COC has been modified per client request on 7/26/2024 to show an updated name for E01@12.0'.

This is a revision of the report originally sent on 7/9/2024 at 14:02 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>
<u>2407049</u>	

Client: <u>Fremont Env</u>		Send Data To:		Send Invoice To:	
Address:		Project Manager: <u>Paul Henahan</u>		Company: <u>Noble</u>	
City/State/Zip:		E-Mail: <u>Paulh@Fremontenv.com</u>		Project Name/Location:	
Phone:		<u>Jeff@Fremontenv.com</u> <u>Ethan@Fremontenv.com</u>		AFE#:	
Sampler Name: <u>J6</u>		Project Name: <u>Farr TYN-R64U-S18 L01</u>		PO/Billing Codes:	
		Project Number:		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEX+N	TMBs(915)	DRO,ORO,GRO	PAHs(915)	EC,PH,SA,Boron	Metals(915)	
1	E02@12.0' <u>E02@12.0'</u>	<u>7/3/24</u>		<u>2</u>			X			X			X	X	X	X	X	X	
2	<u>501@12.0'</u>	<u>↓</u>		<u>↓</u>			↓			↓			↓	↓	↓	↓	↓	↓	
3	<u>E02@12.0'</u>	<u>↓</u>		<u>↓</u>			↓			↓			↓	↓	↓	↓	↓	↓	
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by:	Date/Time:	Received by:	Date/Time: <u>07/03/24</u> <u>1438</u>	TAT Business Days	Field DO	Notes: Sample 3 name updated per client request on 7/26/2024
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: _____		Corrected Temperature <u>24.3</u>		IR gun #: <u>02</u>	HNO3 lot #: _____	

S₂

Sample Receipt Checklist

S2 Work Order# 2407049Client: Fremont Environmental Client Project ID: Farr T4N-R64W-518 L01Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 24.3Thermometer # 02

	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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no sample times
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Gavin J. Lawrence
Custodian Printed Name

07-03/24 1437
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 14:29

B03@13.0'
2407049-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0142	07/03/24	07/03/24	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: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0373	93.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0141	07/03/24	07/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.74	77.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/02/24 14:29

B03@13.0'
2407049-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0147	07/08/24	07/08/24	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: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0172	51.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0209	62.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0166	07/08/24	07/09/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/03/24 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 Henchan

Reported:
08/02/24 14:29

B03@13.0'
2407049-01 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.32	0.200	mg/kg dry	1	BHG0158	07/08/24	07/09/24	EPA 6020B
Barium	41.4	0.400	"	"	"	"	"	"
Cadmium	0.364	0.200	"	"	"	"	"	"
Copper	12.8	0.400	"	"	"	"	"	"
Lead	12.2	0.200	"	"	"	"	"	"
Nickel	11.6	0.400	"	"	"	"	"	"
Silver	0.0361	0.0200	"	"	"	"	"	"
Zinc	73.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0152	07/08/24	07/08/24	EPA 7196A	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	13.9	0.0500	mg/L dry	1	BHG0126	07/03/24	07/08/24	EPA 6020B	
Magnesium	16.8	0.0500	"	"	"	"	"	"	
Sodium	65.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.79	0.00100	units	1	BHG0208	07/09/24	07/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/03/24 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 Henchan

Reported:
08/02/24 14:29

B03@13.0'
2407049-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.5	%	1	BHG0146	07/08/24	07/08/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.486	0.0100	mmhos/cm	1	BHG0129	07/03/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.54		pH Units	1	BHG0130	07/03/24	07/08/24	EPA 9045D	

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Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/02/24 14:29

S01@12.0'
2407049-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0142	07/03/24	07/03/24	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: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0409	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0141	07/03/24	07/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.6	109 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Farr T4N-R64W-S18 L01

Project Number: [none]
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08/02/24 14:29

S01@12.0'
2407049-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0147	07/08/24	07/08/24	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: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0190	57.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0166	07/08/24	07/09/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/03/24 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 Henchan

Reported:
08/02/24 14:29

S01@12.0'
2407049-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.50	0.200	mg/kg dry	1	BHG0158	07/08/24	07/09/24	EPA 6020B
Barium	45.1	0.400	"	"	"	"	"	"
Cadmium	0.241	0.200	"	"	"	"	"	"
Copper	7.49	0.400	"	"	"	"	"	"
Lead	7.76	0.200	"	"	"	"	"	"
Nickel	6.70	0.400	"	"	"	"	"	"
Silver	0.0248	0.0200	"	"	"	"	"	"
Zinc	46.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0152	07/08/24	07/08/24	EPA 7196A	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.3	0.0500	mg/L dry	1	BHG0126	07/03/24	07/08/24	EPA 6020B	
Magnesium	14.6	0.0500	"	"	"	"	"	"	
Sodium	38.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.62	0.00100	units	1	BHG0208	07/09/24	07/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/03/24 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 Henchan

Reported:
08/02/24 14:29

S01@12.0'
2407049-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.9	%	1	BHG0146	07/08/24	07/08/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.309	0.0100	mmhos/cm	1	BHG0129	07/03/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.81		pH Units	1	BHG0130	07/03/24	07/08/24	EPA 9045D	

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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 14:29

E02@12.0'
2407049-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHG0142	07/03/24	07/03/24	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: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHG0141	07/03/24	07/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/03/24 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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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 14:29

E02@12.0'
2407049-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHG0147	07/08/24	07/08/24	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: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0216	64.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHG0166	07/08/24	07/09/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 Henahan

Reported:
08/02/24 14:29

E02@12.0'
2407049-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.43	0.200	mg/kg dry	1	BHG0158	07/08/24	07/09/24	EPA 6020B
Cadmium	0.353	0.200	"	"	"	"	"	"
Copper	9.88	0.400	"	"	"	"	"	"
Lead	10.1	0.200	"	"	"	"	"	"
Nickel	12.6	0.400	"	"	"	"	"	"
Silver	0.0218	0.0200	"	"	"	"	"	"
Zinc	43.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHG0152	07/08/24	07/08/24	EPA 7196A	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	15.1	0.0500	mg/L dry	1	BHG0126	07/03/24	07/08/24	EPA 6020B	
Magnesium	13.6	0.0500	"	"	"	"	"	"	
Sodium	48.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.17	0.00100	units	1	BHG0208	07/09/24	07/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.5		%	1	BHG0146	07/08/24	07/08/24	Calculation	

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 Henehan

Reported:
08/02/24 14:29

E02@12.0'
2407049-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.318	0.0100		mmhos/cm	1	BHG0129	07/03/24	07/08/24	EPA 120.1	

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

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.74			pH Units	1	BHG0130	07/03/24	07/08/24	EPA 9045D	

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 14:29

E02@12.0'
2407049-03RE1 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **07/03/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	250	0.400		mg/kg dry	1	BHG0875	07/08/24	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 14:29

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 BHG0142 - EPA 5030 Soil MS

Blank (BHG0142-BLK1)

Prepared & Analyzed: 07/03/24

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	0.0323		"	0.0400		80.7	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

LCS (BHG0142-BS1)

Prepared & Analyzed: 07/03/24

Benzene	0.0858	0.0020	mg/kg	0.100		85.8	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.0994	0.0050	"	0.100		99.4	70-130			
m,p-Xylene	0.194	0.010	"	0.200		96.9	70-130			
o-Xylene	0.0976	0.0050	"	0.100		97.6	70-130			
1,2,4-Trimethylbenzene	0.0971	0.0050	"	0.100		97.1	70-130			
1,3,5-Trimethylbenzene	0.0967	0.0050	"	0.100		96.7	70-130			
Naphthalene	0.0804	0.0038	"	0.100		80.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0336		"	0.0400		83.9	50-150			
Surrogate: Toluene-d8	0.0425		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.7	50-150			

Matrix Spike (BHG0142-MS1)

Source: 2407049-01

Prepared & Analyzed: 07/03/24

Benzene	0.0964	0.0020	mg/kg	0.100	ND	96.4	70-130			
Toluene	0.114	0.0050	"	0.100	ND	114	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.209	0.010	"	0.200	ND	104	70-130			
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
Naphthalene	0.0850	0.0038	"	0.100	ND	85.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0374		"	0.0400		93.5	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	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 14:29

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 BHG0142 - EPA 5030 Soil MS

Matrix Spike Dup (BHG0142-MSD1)

Source: 2407049-01

Prepared & Analyzed: 07/03/24

Benzene	0.0897	0.0020	mg/kg	0.100	ND	89.7	70-130	7.22	30	
Toluene	0.106	0.0050	"	0.100	ND	106	70-130	7.29	30	
Ethylbenzene	0.0969	0.0050	"	0.100	ND	96.9	70-130	7.74	30	
m,p-Xylene	0.193	0.010	"	0.200	ND	96.3	70-130	7.93	30	
o-Xylene	0.0928	0.0050	"	0.100	ND	92.8	70-130	8.15	30	
1,2,4-Trimethylbenzene	0.0939	0.0050	"	0.100	ND	93.9	70-130	7.44	30	
1,3,5-Trimethylbenzene	0.0947	0.0050	"	0.100	ND	94.7	70-130	7.80	30	
Naphthalene	0.0801	0.0038	"	0.100	ND	80.1	70-130	5.85	30	
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.6	50-150			
Surrogate: Toluene-d8	0.0431		"	0.0400		108	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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 14:29

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 BHG0141 - EPA 3550A

Blank (BHG0141-BLK1)

Prepared & Analyzed: 07/03/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	13.4		"	12.5		107	30-150			

LCS (BHG0141-BS1)

Prepared: 07/03/24 Analyzed: 07/04/24

C10-C28 (DRO)	559	50	mg/kg	500		112	70-130			
Surrogate: o-Terphenyl	12.1		"	12.5		96.9	30-150			

Matrix Spike (BHG0141-MS1)

Source: 2407049-01

Prepared: 07/03/24 Analyzed: 07/04/24

C10-C28 (DRO)	487	50	mg/kg	500	23.2	92.7	70-130			
Surrogate: o-Terphenyl	7.77		"	12.5		62.2	30-150			

Matrix Spike Dup (BHG0141-MSD1)

Source: 2407049-01

Prepared: 07/03/24 Analyzed: 07/04/24

C10-C28 (DRO)	499	50	mg/kg	500	23.2	95.2	70-130	2.49	20	
Surrogate: o-Terphenyl	7.86		"	12.5		62.8	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 14:29

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 BHG0147 - EPA 5030 Soil MS

Blank (BHG0147-BLK1)

Prepared & Analyzed: 07/08/24

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	0.0214	"	0.0333	64.2	40-150
Surrogate: Fluoranthene-d10	0.0281	"	0.0333	84.2	40-150

LCS (BHG0147-BS1)

Prepared & Analyzed: 07/08/24

Acenaphthene	0.0271	0.00500	mg/kg	0.0333	81.2	31-137
Anthracene	0.0281	0.00500	"	0.0333	84.4	30-120
Benzo (a) anthracene	0.0312	0.00500	"	0.0333	93.6	30-120
Benzo (a) pyrene	0.0281	0.00500	"	0.0333	84.2	30-120
Benzo (b) fluoranthene	0.0288	0.00500	"	0.0333	86.5	30-120
Benzo (k) fluoranthene	0.0292	0.00500	"	0.0333	87.7	30-120
Chrysene	0.0302	0.00500	"	0.0333	90.5	30-120
Dibenz (a,h) anthracene	0.0277	0.00500	"	0.0333	83.2	30-120
Fluoranthene	0.0292	0.00500	"	0.0333	87.7	30-120
Fluorene	0.0290	0.00500	"	0.0333	87.1	30-120
Indeno (1,2,3-cd) pyrene	0.0268	0.00500	"	0.0333	80.5	30-120
Pyrene	0.0316	0.00500	"	0.0333	94.8	35-142
1-Methylnaphthalene	0.0236	0.00500	"	0.0333	70.7	35-142
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	68.0	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0195	"	0.0333	58.6	40-150
Surrogate: Fluoranthene-d10	0.0301	"	0.0333	90.3	40-150

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 14:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHG0147 - EPA 5030 Soil MS

Matrix Spike (BHG0147-MS1)

Source: 2407016-01

Prepared & Analyzed: 07/08/24

Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.6	31-137			
Anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120			
Benzo (a) anthracene	0.0261	0.00500	"	0.0333	ND	78.4	30-120			
Benzo (a) pyrene	0.0258	0.00500	"	0.0333	ND	77.4	30-120			
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	0.00638	82.2	30-120			
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Chrysene	0.0443	0.00500	"	0.0333	0.0244	59.6	30-120			
Dibenz (a,h) anthracene	0.0136	0.00500	"	0.0333	ND	40.8	30-120			
Fluoranthene	0.0275	0.00500	"	0.0333	ND	82.4	30-120			
Fluorene	0.0140	0.00500	"	0.0333	ND	41.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.2	30-120			
Pyrene	0.0345	0.00500	"	0.0333	0.00828	78.7	35-142			
1-Methylnaphthalene	0.0258	0.00500	"	0.0333	ND	77.5	15-130			
2-Methylnaphthalene	0.0199	0.00500	"	0.0333	ND	59.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0169		"	0.0333		50.8	40-150			
Surrogate: Fluoranthene-d10	0.0216		"	0.0333		64.7	40-150			

Matrix Spike Dup (BHG0147-MSD1)

Source: 2407016-01

Prepared & Analyzed: 07/08/24

Acenaphthene	0.0198	0.00500	mg/kg	0.0333	ND	59.5	31-137	15.7	30	
Anthracene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	26.3	30	
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.2	30-120	19.9	30	
Benzo (a) pyrene	0.0277	0.00500	"	0.0333	ND	83.0	30-120	6.95	30	
Benzo (b) fluoranthene	0.0377	0.00500	"	0.0333	0.00638	93.9	30-120	10.9	30	
Benzo (k) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.3	30-120	8.37	30	
Chrysene	0.0409	0.00500	"	0.0333	0.0244	49.5	30-120	7.94	30	
Dibenz (a,h) anthracene	0.0140	0.00500	"	0.0333	ND	41.9	30-120	2.69	30	
Fluoranthene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	35.0	30	QR-02
Fluorene	0.0140	0.00500	"	0.0333	ND	42.2	30-120	0.688	30	
Indeno (1,2,3-cd) pyrene	0.0139	0.00500	"	0.0333	ND	41.8	30-120	12.0	30	
Pyrene	0.0294	0.00500	"	0.0333	0.00828	63.2	35-142	16.2	30	
1-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.2	15-130	9.46	50	
2-Methylnaphthalene	0.0197	0.00500	"	0.0333	ND	59.1	15-130	1.09	50	
Surrogate: 2-Methylnaphthalene-d10	0.0175		"	0.0333		52.4	40-150			
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		51.8	40-150			

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 14:29

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 BHG0166 - EPA 3050B

Blank (BHG0166-BLK1)

Prepared: 07/08/24 Analyzed: 07/09/24

Boron ND 2.00 mg/L

LCS (BHG0166-BS1)

Prepared: 07/08/24 Analyzed: 07/09/24

Boron 4.95 2.00 mg/L 5.00 99.1 80-120

Duplicate (BHG0166-DUP1)

Source: 2407016-01

Prepared: 07/08/24 Analyzed: 07/09/24

Boron 0.520 2.00 mg/L 0.357 37.2 20 QR-02

Matrix Spike (BHG0166-MS1)

Source: 2407016-01

Prepared: 07/08/24 Analyzed: 07/09/24

Boron 6.40 2.00 mg/L 5.05 0.357 120 75-125

Matrix Spike Dup (BHG0166-MSD1)

Source: 2407016-01

Prepared: 07/08/24 Analyzed: 07/09/24

Boron 6.10 2.00 mg/L 5.05 0.357 114 75-125 4.69 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 14:29

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 BHG0158 - EPA 3050B

Blank (BHG0158-BLK1)

Prepared: 07/08/24 Analyzed: 07/09/24

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

LCS (BHG0158-BS1)

Prepared: 07/08/24 Analyzed: 07/09/24

Arsenic	37.3	0.200	mg/kg wet	40.0	93.2	80-120
Barium	35.9	0.400	"	40.0	89.6	80-120
Cadmium	1.77	0.200	"	2.00	88.5	80-120
Copper	33.5	0.400	"	40.0	83.7	80-120
Lead	17.7	0.200	"	20.0	88.6	80-120
Nickel	33.3	0.400	"	40.0	83.3	80-120
Silver	1.76	0.0200	"	2.00	88.1	80-120
Zinc	33.7	0.400	"	40.0	84.3	80-120
Selenium	3.52	0.260	"	4.00	87.9	80-120

Duplicate (BHG0158-DUP1)

Source: 2407025-01

Prepared: 07/08/24 Analyzed: 07/09/24

Arsenic	1.05	0.200	mg/kg dry	1.07	2.17	20
Barium	34.8	0.400	"	33.2	4.92	20
Cadmium	0.0907	0.200	"	0.0816	10.6	20
Copper	3.09	0.400	"	3.01	2.68	20
Lead	3.67	0.200	"	3.28	11.2	20
Nickel	2.44	0.400	"	2.41	0.898	20
Silver	0.0105	0.0200	"	0.0113	7.88	20
Zinc	11.3	0.400	"	10.8	4.59	20
Selenium	ND	0.260	"	ND		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 14:29

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 BHG0158 - EPA 3050B

Matrix Spike (BHG0158-MS1)		Source: 2407025-01			Prepared: 07/08/24 Analyzed: 07/09/24					
Arsenic	31.3	0.200	mg/kg dry	38.5	1.07	78.6	75-125			
Barium	84.3	0.400	"	38.5	33.2	133	75-125			QM-07
Cadmium	2.11	0.200	"	1.92	0.0816	106	75-125			
Copper	40.4	0.400	"	38.5	3.01	97.2	75-125			
Lead	23.2	0.200	"	19.2	3.28	103	75-125			
Nickel	40.2	0.400	"	38.5	2.41	98.1	75-125			
Silver	1.91	0.0200	"	1.92	0.0113	98.7	75-125			
Zinc	49.9	0.400	"	38.5	10.8	102	75-125			
Selenium	3.40	0.260	"	3.85	ND	88.4	75-125			

Matrix Spike Dup (BHG0158-MSD1)		Source: 2407025-01			Prepared: 07/08/24 Analyzed: 07/09/24					
Arsenic	32.4	0.200	mg/kg dry	39.0	1.07	80.3	75-125	3.44	25	
Barium	85.5	0.400	"	39.0	33.2	134	75-125	1.38	25	QM-07
Cadmium	2.16	0.200	"	1.95	0.0816	107	75-125	2.45	25	
Copper	40.4	0.400	"	39.0	3.01	95.7	75-125	0.0187	25	
Lead	23.9	0.200	"	19.5	3.28	105	75-125	2.97	25	
Nickel	40.2	0.400	"	39.0	2.41	96.9	75-125	0.200	25	
Silver	2.15	0.0200	"	1.95	0.0113	109	75-125	11.8	25	
Zinc	49.6	0.400	"	39.0	10.8	99.5	75-125	0.591	25	
Selenium	3.52	0.260	"	3.90	ND	90.2	75-125	3.49	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	"							

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 14:29

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			

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 14:29

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 Henehan

Reported:
08/02/24 14:29

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 BHG0152 - 3060A Mod

Blank (BHG0152-BLK1)

Prepared & Analyzed: 07/08/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHG0152-BS1)

Prepared & Analyzed: 07/08/24

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BHG0152-DUP1)

Source: 2407016-01

Prepared & Analyzed: 07/08/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHG0152-MS1)

Source: 2407016-01

Prepared & Analyzed: 07/08/24

Chromium, Hexavalent 27.2 0.30 mg/kg dry 26.8 ND 101 75-125

Matrix Spike Dup (BHG0152-MSD1)

Source: 2407016-01

Prepared & Analyzed: 07/08/24

Chromium, Hexavalent 27.4 0.30 mg/kg dry 26.8 ND 102 75-125 0.590 20

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 14:29

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 BHG0126 - General Preparation

Blank (BHG0126-BLK1)

Prepared: 07/03/24 Analyzed: 07/08/24

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

LCS (BHG0126-BS1)

Prepared: 07/03/24 Analyzed: 07/08/24

Calcium	5.02	0.0500	mg/L wet	5.00	100	70-130
Magnesium	5.11	0.0500	"	5.00	102	70-130
Sodium	5.11	0.0500	"	5.00	102	70-130

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 14:29
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Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BHG0146 - General Preparation

Duplicate (BHG0146-DUP1)		Source: 2407024-31			Prepared & Analyzed: 07/08/24						
% Solids	97.7		%		97.4			0.267		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 14:29

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 BHG0129 - General Preparation

Blank (BHG0129-BLK1)

Prepared: 07/03/24 Analyzed: 07/08/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHG0129-BS1)

Prepared: 07/03/24 Analyzed: 07/08/24

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

Duplicate (BHG0129-DUP1)

Source: 2407024-21

Prepared: 07/03/24 Analyzed: 07/08/24

Specific Conductance (EC) 1.72 0.0100 mmhos/cm 1.73 0.811 20

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 14:29

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 BHG0130 - General Preparation

LCS (BHG0130-BS1)

Prepared: 07/03/24 Analyzed: 07/08/24

pH	9.19		pH Units	9.18		100	95-105		
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Duplicate (BHG0130-DUP1)

Source: 2407024-21

Prepared: 07/03/24 Analyzed: 07/08/24

pH	8.15		pH Units		8.15			0.00	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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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 14:29

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