

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 02, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

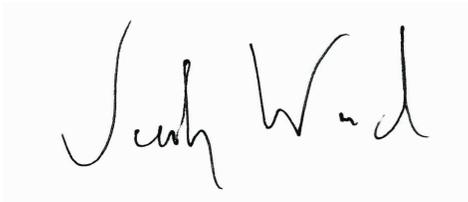
Wellington, CO 80549

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 that reads "Jacob Wood". The signature is written in a cursive style with a small flourish at the end of the word "Wood".

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



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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: Project Manager: <u>Paul Henahan</u>	Send Invoice To: Company: <u>Noble</u>
Address:	E-Mail: <u>Paulh@fremontenv.com</u>	Project Name/Location:
City/State/Zip:	<u>Jeffj@fremontenv.com Ethanb@fremontenv.com</u>	AFE#:
Phone:	Project Name: <u>Ferr TYN-R64U-S18 L01</u>	PO/Billing Codes:
Sampler Name: <u>J6</u>	Project Number:	Contact:

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

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

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) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	<i>no sample times</i>
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 Strohhouse
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: 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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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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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

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

PAH by EPA Method 8270D SIM

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

S01@12.0'
2407049-02 (Soil)

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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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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

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
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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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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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)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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	

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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)

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

Summit Scientific



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 PO Box 1289
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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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Barium	250	0.400	mg/kg dry	1	BHG0875	07/08/24	08/02/24	EPA 6020B	

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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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0323		"	0.0400		80.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0394		"	0.0400		98.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0336		"	0.0400		83.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0425		"	0.0400		106	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0374		"	0.0400		93.5	50-150			
<i>Surrogate: Toluene-d8</i>	0.0424		"	0.0400		106	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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 Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

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			

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

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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -Terphenyl	7.86		"	12.5		62.8		30-150		

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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

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

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	"								
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0214</i>		"	<i>0.0333</i>		<i>64.2</i>		<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0281</i>		"	<i>0.0333</i>		<i>84.2</i>		<i>40-150</i>			

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			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0195</i>		"	<i>0.0333</i>		<i>58.6</i>		<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0301</i>		"	<i>0.0333</i>		<i>90.3</i>		<i>40-150</i>			

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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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

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

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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	"									

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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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

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

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		

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

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

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 Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

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				

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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 - Quality Control

Summit Scientific

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

Batch BHG0146 - General Preparation

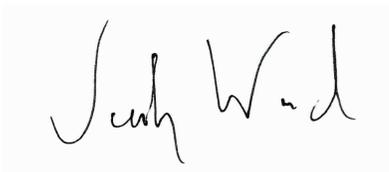
Duplicate (BHG0146-DUP1)

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		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

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	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

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				
Duplicate (BHG0130-DUP1)										
					Source: 2407024-21 Prepared: 07/03/24 Analyzed: 07/08/24					
pH	8.15		pH Units	8.15		0.00	20			

Batch BHG0786 - General Preparation

LCS (BHG0786-BS1)										
					Prepared & Analyzed: 07/26/24					
pH	9.08		pH Units	9.18	98.9	95-105				
Duplicate (BHG0786-DUP1)										
					Source: 2407343-01 Prepared & Analyzed: 07/26/24					
pH	8.05		pH Units	8.06		0.124	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

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