

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 28, 2023

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - Sauer G04-29D  
Work Order #2306333

Enclosed are the results of analyses for samples received by Summit Scientific on 06/16/23 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a small "w" at the end of the last name.

Jacob Wood For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01 3ft	2306333-01	Soil	06/16/23 00:00	06/16/23 13:00

Summit Scientific

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# SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2306333	

<b>Client:</b> Fremont Environmental		<b>Send Data To:</b>		<b>Send Invoice To:</b>	
<b>Address:</b> 8305 6th St.		<b>Project Manager:</b> Henehan		<b>Company:</b>	
<b>City/State/Zip:</b> Wellington, CO		<b>E-Mail:</b> Fremont Dist. List		<b>Project Name/Location:</b>	
<b>Phone:</b> 603-477-6907		<b>Project Name:</b> Noble - Saver G04-29D		<b>AFEN:</b>	
<b>Sampler Name:</b> Ethan Black		<b>Project Number:</b>		<b>PO/Billing Codes:</b> UWRWE-A258-ABN	
				<b>Contact:</b>	

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, Naphthalene, TMBs	TPH (C6-C16)	PAH	Table 915-1 Metals		SAR, EC, pH, Boron
1	FLO1 SET	6/16/23		2			X						X	X	X	X		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

<b>Relinquished by:</b> Ethan Black	<b>Date/Time:</b> 6/16/23 1300	<b>Received by:</b> [Signature]	<b>Date/Time:</b> 6/16/23 1300	<b>TAT Business Days</b>	<b>Field DO</b>	<b>Notes:</b>
				Same Day	Field EC	
<b>Relinquished by:</b> S2	<b>Date/Time:</b> 6/16/23 1300	<b>Received by:</b> [Signature]	<b>Date/Time:</b> 6/16/23 1300	1 Day	Field ORP	
				2 Days	Field pH	
<b>Relinquished by:</b> [Signature]	<b>Date/Time:</b>	<b>Received by:</b>	<b>Date/Time:</b>	3 Days	Field Temp.	
<b>Temperature Upon Receipt:</b> 13.2	<b>Corrected Temperature:</b> 0	<b>IR gun #:</b> 1	<b>HNO3 lot #:</b>	Standard	X Field Turb.	

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2306333

Client: Fremont Client Project ID: Noble-Saver G04-290

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

-

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

Temp (°C) 13.1

Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> 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"/>	<i>on ICE</i>
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>3</i>
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

*AS*

Custodian Printed Name

*6/16/23*

Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

**FL01 3ft**  
**2306333-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0664	06/19/23	06/20/23	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: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0666	06/19/23	06/19/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.7	93.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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06/28/23 15:40

**FL01 3ft**  
**2306333-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0636	06/19/23	06/20/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.00939</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.00830</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0148</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.00548</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00907</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0192</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.00709</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0175</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0249	74.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0288	86.4 %	40-150		"	"	"	"	

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

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.127</b>	0.0100	mg/L	1	BGF0749	06/21/23	06/22/23	EPA 6020B	

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

Date Sampled: **06/16/23 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 - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

**FL01 3ft**  
**2306333-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	53.7	0.0557	mg/L dry	1	BGF0797	06/22/23	06/27/23	EPA 6020B	
Magnesium	34.2	0.0557	"	"	"	"	"	"	
Sodium	174	0.0557	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.57	0.00100	units	1	BGF1024	06/28/23	06/28/23	Calculation	

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

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.7		%	1	BGF0717	06/20/23	06/20/23	Calculation	

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

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.32	0.0100	mmhos/cm	1	BGF0827	06/23/23	06/23/23	EPA 120.1	

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

Date Sampled: **06/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGF0828	06/23/23	06/23/23	EPA 9045D	

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Project: Noble - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

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

#### Summit Scientific

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

#### Batch BGF0664 - EPA 5030 Soil MS

##### Blank (BGF0664-BLK1)

Prepared: 06/19/23 Analyzed: 06/20/23

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>	<i>0.0360</i>		<i>"</i>	<i>0.0400</i>		<i>90.1</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>		<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.7</i>		<i>50-150</i>		

##### LCS (BGF0664-BS1)

Prepared: 06/19/23 Analyzed: 06/20/23

Benzene	0.117	0.0020	mg/kg	0.125		93.3		70-130		
Toluene	0.121	0.0050	"	0.125		96.6		70-130		
Ethylbenzene	0.130	0.0050	"	0.125		104		70-130		
m,p-Xylene	0.264	0.010	"	0.250		106		70-130		
o-Xylene	0.127	0.0050	"	0.125		102		70-130		
1,2,4-Trimethylbenzene	0.152	0.0050	"	0.125		122		70-130		
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125		122		70-130		
Naphthalene	0.151	0.0038	"	0.125		121		70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>		<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>		<i>50-150</i>		

##### Matrix Spike (BGF0664-MS1)

Source: 2306314-01

Prepared: 06/19/23 Analyzed: 06/20/23

Benzene	0.116	0.0020	mg/kg	0.125	ND	93.1		70-130		
Toluene	0.123	0.0050	"	0.125	ND	98.5		70-130		
Ethylbenzene	0.128	0.0050	"	0.125	ND	103		70-130		
m,p-Xylene	0.268	0.010	"	0.250	ND	107		70-130		
o-Xylene	0.127	0.0050	"	0.125	ND	102		70-130		
1,2,4-Trimethylbenzene	0.152	0.0050	"	0.125	ND	122		70-130		
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125	ND	122		70-130		
Naphthalene	0.160	0.0038	"	0.125	ND	128		70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>		<i>50-150</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>		<i>50-150</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>		<i>50-150</i>		

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 Wellington CO, 80549

Project: Noble - Sauer G04-29D  
 Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

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

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

**Batch BGF0664 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGF0664-MSD1)</b>	<b>Source: 2306314-01</b>			<b>Prepared: 06/19/23 Analyzed: 06/20/23</b>						
Benzene	0.116	0.0020	mg/kg	0.125	ND	92.9	70-130	0.258	30	
Toluene	0.124	0.0050	"	0.125	ND	98.8	70-130	0.316	30	
Ethylbenzene	0.125	0.0050	"	0.125	ND	99.7	70-130	2.99	30	
m,p-Xylene	0.265	0.010	"	0.250	ND	106	70-130	1.12	30	
o-Xylene	0.124	0.0050	"	0.125	ND	99.0	70-130	2.84	30	
1,2,4-Trimethylbenzene	0.149	0.0050	"	0.125	ND	119	70-130	2.05	30	
1,3,5-Trimethylbenzene	0.150	0.0050	"	0.125	ND	120	70-130	1.59	30	
Naphthalene	0.152	0.0038	"	0.125	ND	122	70-130	5.09	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.0</i>	<i>50-150</i>			

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 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

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

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

**Batch BGF0666 - EPA 3550A**

**Blank (BGF0666-BLK1)**

Prepared & Analyzed: 06/19/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		95.9	30-150				

**LCS (BGF0666-BS1)**

Prepared & Analyzed: 06/19/23

C10-C28 (DRO)	529	50	mg/kg	500		106	70-130				
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		93.0	30-150				

**Matrix Spike (BGF0666-MS1)**

Source: 2306314-01

Prepared & Analyzed: 06/19/23

C10-C28 (DRO)	530	50	mg/kg	500	24.2	101	70-130				
Surrogate: <i>o</i> -Terphenyl	11.8		"	12.5		94.2	30-150				

**Matrix Spike Dup (BGF0666-MSD1)**

Source: 2306314-01

Prepared & Analyzed: 06/19/23

C10-C28 (DRO)	573	50	mg/kg	500	24.2	110	70-130	7.72	20		
Surrogate: <i>o</i> -Terphenyl	11.8		"	12.5		94.4	30-150				

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Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

**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 BGF0636 - EPA 5030 Soil MS**

**Blank (BGF0636-BLK1)**

Prepared & Analyzed: 06/19/23

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>0.0255</i>		"	<i>0.0333</i>		<i>76.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0307</i>		"	<i>0.0333</i>		<i>92.0</i>	<i>40-150</i>			

**LCS (BGF0636-BS1)**

Prepared & Analyzed: 06/19/23

Acenaphthene	0.0279	0.00500	mg/kg	0.0333		83.7	31-137			
Anthracene	0.0297	0.00500	"	0.0333		89.0	30-120			
Benzo (a) anthracene	0.0289	0.00500	"	0.0333		86.8	30-120			
Benzo (a) pyrene	0.0245	0.00500	"	0.0333		73.6	30-120			
Benzo (b) fluoranthene	0.0261	0.00500	"	0.0333		78.4	30-120			
Benzo (k) fluoranthene	0.0261	0.00500	"	0.0333		78.2	30-120			
Chrysene	0.0289	0.00500	"	0.0333		86.7	30-120			
Dibenz (a,h) anthracene	0.0225	0.00500	"	0.0333		67.5	30-120			
Fluoranthene	0.0291	0.00500	"	0.0333		87.3	30-120			
Fluorene	0.0267	0.00500	"	0.0333		80.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0283	0.00500	"	0.0333		85.0	30-120			
Pyrene	0.0304	0.00500	"	0.0333		91.2	35-142			
1-Methylnaphthalene	0.0241	0.00500	"	0.0333		72.4	35-142			
2-Methylnaphthalene	0.0237	0.00500	"	0.0333		71.1	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0249</i>		"	<i>0.0333</i>		<i>74.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0302</i>		"	<i>0.0333</i>		<i>90.5</i>	<i>40-150</i>			

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

**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 BGF0636 - EPA 5030 Soil MS**

<b>Matrix Spike (BGF0636-MS1)</b>	<b>Source: 2306317-01</b>			<b>Prepared &amp; Analyzed: 06/19/23</b>								
Acenaphthene	0.0327	0.00500	mg/kg	0.0333	ND	98.1	31-137					
Anthracene	0.0203	0.00500	"	0.0333	ND	61.0	30-120					
Benzo (a) anthracene	0.0266	0.00500	"	0.0333	0.00345	69.4	30-120					
Benzo (a) pyrene	0.0310	0.00500	"	0.0333	ND	93.1	30-120					
Benzo (b) fluoranthene	0.0377	0.00500	"	0.0333	ND	113	30-120					
Benzo (k) fluoranthene	0.0264	0.00500	"	0.0333	ND	79.2	30-120					
Chrysene	0.0245	0.00500	"	0.0333	ND	73.4	30-120					
Dibenz (a,h) anthracene	0.0310	0.00500	"	0.0333	ND	93.0	30-120					
Fluoranthene	0.0358	0.00500	"	0.0333	0.00617	88.9	30-120					
Fluorene	0.0245	0.00500	"	0.0333	ND	73.4	30-120					
Indeno (1,2,3-cd) pyrene	0.0301	0.00500	"	0.0333	ND	90.4	30-120					
Pyrene	0.0323	0.00500	"	0.0333	0.00464	82.9	35-142					
1-Methylnaphthalene	0.0249	0.00500	"	0.0333	ND	74.6	15-130					
2-Methylnaphthalene	0.0255	0.00500	"	0.0333	ND	76.5	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0194</i>		"	<i>0.0333</i>		<i>58.2</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0294</i>		"	<i>0.0333</i>		<i>88.3</i>	<i>40-150</i>					

<b>Matrix Spike Dup (BGF0636-MSD1)</b>	<b>Source: 2306317-01</b>			<b>Prepared &amp; Analyzed: 06/19/23</b>								
Acenaphthene	0.0330	0.00500	mg/kg	0.0333	ND	99.0	31-137	0.897	30			
Anthracene	0.0242	0.00500	"	0.0333	ND	72.7	30-120	17.5	30			
Benzo (a) anthracene	0.0289	0.00500	"	0.0333	0.00345	76.3	30-120	8.26	30			
Benzo (a) pyrene	0.0231	0.00500	"	0.0333	ND	69.2	30-120	29.4	30			
Benzo (b) fluoranthene	0.0301	0.00500	"	0.0333	ND	90.2	30-120	22.6	30			
Benzo (k) fluoranthene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	22.9	30			
Chrysene	0.0263	0.00500	"	0.0333	ND	79.0	30-120	7.37	30			
Dibenz (a,h) anthracene	0.0233	0.00500	"	0.0333	ND	70.0	30-120	28.3	30			
Fluoranthene	0.0273	0.00500	"	0.0333	0.00617	63.5	30-120	26.8	30			
Fluorene	0.0220	0.00500	"	0.0333	ND	66.0	30-120	10.6	30			
Indeno (1,2,3-cd) pyrene	0.0307	0.00500	"	0.0333	ND	92.0	30-120	1.79	30			
Pyrene	0.0264	0.00500	"	0.0333	0.00464	65.4	35-142	19.9	30			
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.5	15-130	14.5	50			
2-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	15-130	15.9	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0227</i>		"	<i>0.0333</i>		<i>68.1</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0340</i>		"	<i>0.0333</i>		<i>102</i>	<i>40-150</i>					

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Sauer G04-29D  
 Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

**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 BGF0749 - EPA 3050B**

**Blank (BGF0749-BLK1)**

Prepared: 06/21/23 Analyzed: 06/22/23

Boron ND 0.0100 mg/L

**LCS (BGF0749-BS1)**

Prepared: 06/21/23 Analyzed: 06/22/23

Boron 4.09 0.0100 mg/L 5.00 81.8 80-120

**Duplicate (BGF0749-DUP1)**

Source: 2306329-01

Prepared: 06/21/23 Analyzed: 06/22/23

Boron 0.446 0.0100 mg/L 0.464 3.91 20

**Matrix Spike (BGF0749-MS1)**

Source: 2306329-01

Prepared: 06/21/23 Analyzed: 06/22/23

Boron 5.05 0.0100 mg/L 5.00 0.464 91.7 75-125

**Matrix Spike Dup (BGF0749-MSD1)**

Source: 2306329-01

Prepared: 06/21/23 Analyzed: 06/22/23

Boron 5.00 0.0100 mg/L 5.00 0.464 90.7 75-125 0.962 25

Summit Scientific

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Fremont Environmental  
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 Wellington CO, 80549

Project: Noble - Sauer G04-29D  
 Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

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

**Summit Scientific**

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

**Batch BGF0797 - General Preparation**

**Blank (BGF0797-BLK1)**

Prepared: 06/22/23 Analyzed: 06/27/23

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

**LCS (BGF0797-BS1)**

Prepared: 06/22/23 Analyzed: 06/27/23

Calcium	5.44	0.0500	mg/L wet	5.00	109	70-130
Magnesium	4.68	0.0500	"	5.00	93.6	70-130
Sodium	5.20	0.0500	"	5.00	104	70-130

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Sauer G04-29D

Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

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

**Batch BGF0717 - General Preparation**

**Duplicate (BGF0717-DUP1)**

**Source: 2306329-01**

Prepared & Analyzed: 06/20/23

% Solids	92.0		%		91.7			0.232	20	
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Sauer G04-29D  
 Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

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

**Summit Scientific**

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

**Batch BGF0827 - General Preparation**

**Blank (BGF0827-BLK1)**

Prepared & Analyzed: 06/23/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGF0827-BS1)**

Prepared & Analyzed: 06/23/23

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

**Duplicate (BGF0827-DUP1)**

Source: 2306333-01

Prepared & Analyzed: 06/23/23

Specific Conductance (EC) 1.32 0.0100 mmhos/cm 1.32 0.00 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Sauer G04-29D

Project Number: UWRWE-A2583-ABN  
 Project Manager: Paul Henchan

**Reported:**  
 06/28/23 15:40

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

**Summit Scientific**

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

**Batch BGF0828 - General Preparation**

**LCS (BGF0828-BS1)**

Prepared & Analyzed: 06/23/23

pH 8.95 pH Units 9.18 97.5 95-105

**Duplicate (BGF0828-DUP1)**

Source: 2306333-01

Prepared & Analyzed: 06/23/23

pH 7.88 pH Units 7.88 0.00 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Sauer G04-29D  
Project Number: UWRWE-A2583-ABN  
Project Manager: Paul Henchan

**Reported:**  
06/28/23 15:40

### Notes and Definitions

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