

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 19, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Spike State GWS CC30-02

Work Order #2306078

Enclosed are the results of analyses for samples received by Summit Scientific on 06/05/23 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sheely".

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henehan

Reported:
06/19/23 15:17

ANALYTICAL REPORT FOR SAMPLES

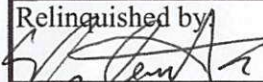
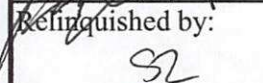
Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01 3 feet	2306078-01	Soil	06/05/23 12:55	06/05/23 16:50
FL06 4 feet	2306078-02	Soil	06/05/23 11:30	06/05/23 16:50

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.

		Send Data To:		Send Invoice To:	
Client: Fremont Environmental		Project Manager: Paul Henehan		Company: Noble	
Address:		E-Mail: Fremont Distribution List		Project Name/Location: Spike State GWS CC30-02	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: Spike State GWS CC30-02		PO/Billing Codes: UWRWE-A3043-ABM	
Sampler Name: Stanley Gilbert		Project Number:		Contact: Mike Montoya	

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate		HOLD	
1	FLO2 3 feet	6/5/23	12:55	2			X			X			X	X	X	X					
2	FLO6 4 feet	6/5/23	11:30	2			X			X			X	X	X	X					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: 	Date/Time: 6/5/23 16:50	Received by: Summit North	Date/Time: 6/5/23 16:50	TAT Business Days	Field DO	Notes:
Relinquished by: 92	Date/Time: 6/5/23 16:50	Received by: 	Date/Time: 6/5/23 16:50	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	Field Turb.	
Temperature Upon Receipt: 16.4	Corrected Temperature: 6	IR gun #:		HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2306078Client: Fremont Client Project ID: Spike State GWS CC30-02Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input 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) 16.4Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input 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.
AS
Custodian Printed Name

4/5/23
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henehan

Reported:
06/19/23 15:17

FL01 3 feet
2306078-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0302	06/08/23	06/08/23	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: **06/05/23 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0308	06/08/23	06/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.8	118 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01 3 feet
2306078-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0272	06/08/23	06/09/23	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: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0232	69.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0863	0.0100	mg/L	1	BGF0406	06/12/23	06/16/23	EPA 6020B	

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

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: [none]
Project Manager: Paul Henchan

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FL01 3 feet
2306078-01 (Soil)

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

Calcium	205	0.0536	mg/L dry	1	BGF0402	06/11/23	06/18/23	EPA 6020B
Magnesium	53.2	0.0536	"	"	"	"	"	"
Sodium	6.54	0.0536	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.105	0.00100	units	1	BGF0655	06/19/23	06/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.2		%	1	BGF0404	06/12/23	06/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.244	0.0100	mmhos/cm	1	BGF0410	06/12/23	06/12/23	EPA 120.1	

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

Date Sampled: **06/05/23 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.45		pH Units	1	BGF0409	06/12/23	06/12/23	EPA 9045D	

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FL06 4 feet
2306078-02 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0302	06/08/23	06/08/23	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: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0389	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0388	97.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0308	06/08/23	06/08/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.1	121 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL06 4 feet
2306078-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGF0272	06/08/23	06/09/23	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: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0235	70.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0258	77.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.0498	0.0100	mg/L	1	BGF0406	06/12/23	06/16/23	EPA 6020B	

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

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

FL06 4 feet
2306078-02 (Soil)

Summit Scientific

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

Calcium	260	0.0526	mg/L dry	1	BGF0402	06/11/23	06/18/23	EPA 6020B
Magnesium	64.4	0.0526	"	"	"	"	"	"
Sodium	4.42	0.0526	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0636	0.00100	units	1	BGF0655	06/19/23	06/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.0		%	1	BGF0404	06/12/23	06/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.194	0.0100	mmhos/cm	1	BGF0410	06/12/23	06/12/23	EPA 120.1	

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

Date Sampled: **06/05/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.87		pH Units	1	BGF0409	06/12/23	06/12/23	EPA 9045D	

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Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

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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 BGF0302 - EPA 5030 Soil MS

Blank (BGF0302-BLK1)

Prepared & Analyzed: 06/08/23

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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.5	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

LCS (BGF0302-BS1)

Prepared & Analyzed: 06/08/23

Benzene	0.0683	0.0020	mg/kg	0.0750		91.1	70-130			
Toluene	0.0784	0.0050	"	0.0750		105	70-130			
Ethylbenzene	0.0881	0.0050	"	0.0750		117	70-130			
m,p-Xylene	0.173	0.010	"	0.150		115	70-130			
o-Xylene	0.0787	0.0050	"	0.0750		105	70-130			
1,2,4-Trimethylbenzene	0.0816	0.0050	"	0.0750		109	70-130			
1,3,5-Trimethylbenzene	0.0859	0.0050	"	0.0750		115	70-130			
Naphthalene	0.0696	0.0038	"	0.0750		92.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0358		"	0.0400		89.5	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	50-150			

Matrix Spike (BGF0302-MS1)

Source: 2306078-01

Prepared & Analyzed: 06/08/23

Benzene	0.0674	0.0020	mg/kg	0.0750	ND	89.8	70-130			
Toluene	0.0757	0.0050	"	0.0750	ND	101	70-130			
Ethylbenzene	0.0848	0.0050	"	0.0750	ND	113	70-130			
m,p-Xylene	0.169	0.010	"	0.150	ND	113	70-130			
o-Xylene	0.0758	0.0050	"	0.0750	ND	101	70-130			
1,2,4-Trimethylbenzene	0.0776	0.0050	"	0.0750	ND	103	70-130			
1,3,5-Trimethylbenzene	0.0802	0.0050	"	0.0750	ND	107	70-130			
Naphthalene	0.0686	0.0038	"	0.0750	ND	91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0371		"	0.0400		92.8	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	50-150			

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Project Number: [none]
Project Manager: Paul Henchan

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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 BGF0302 - EPA 5030 Soil MS

Matrix Spike Dup (BGF0302-MSD1)	Source: 2306078-01			Prepared & Analyzed: 06/08/23						
Benzene	0.0686	0.0020	mg/kg	0.0750	ND	91.5	70-130	1.85	30	
Toluene	0.0798	0.0050	"	0.0750	ND	106	70-130	5.29	30	
Ethylbenzene	0.0884	0.0050	"	0.0750	ND	118	70-130	4.12	30	
m,p-Xylene	0.174	0.010	"	0.150	ND	116	70-130	2.77	30	
o-Xylene	0.0792	0.0050	"	0.0750	ND	106	70-130	4.41	30	
1,2,4-Trimethylbenzene	0.0789	0.0050	"	0.0750	ND	105	70-130	1.69	30	
1,3,5-Trimethylbenzene	0.0829	0.0050	"	0.0750	ND	111	70-130	3.35	30	
Naphthalene	0.0709	0.0038	"	0.0750	ND	94.5	70-130	3.31	30	
Surrogate: 1,2-Dichloroethane-d4	0.0378		"	0.0400		94.4	50-150			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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 BGF0308 - EPA 3550A

Blank (BGF0308-BLK1)

Prepared & Analyzed: 06/08/23

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	14.8	"	12.5	118	30-150
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LCS (BGF0308-BS1)

Prepared & Analyzed: 06/08/23

C10-C28 (DRO)	490	50	mg/kg	500	98.0	70-130
Surrogate: o-Terphenyl	14.3	"	12.5	115	30-150	

Matrix Spike (BGF0308-MS1)

Source: 2306078-01

Prepared & Analyzed: 06/08/23

C10-C28 (DRO)	451	50	mg/kg	500	ND	90.1	70-130
Surrogate: o-Terphenyl	14.6	"	12.5	117	30-150		

Matrix Spike Dup (BGF0308-MSD1)

Source: 2306078-01

Prepared & Analyzed: 06/08/23

C10-C28 (DRO)	501	50	mg/kg	500	ND	100	70-130	10.5	20
Surrogate: o-Terphenyl	14.8	"	12.5	119	30-150				

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Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGF0272 - EPA 5030 Soil MS

Blank (BGF0272-BLK1)

Prepared & Analyzed: 06/08/23

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0385		"	0.0333		115	40-150			
Surrogate: Fluoranthene-d10	0.0361		"	0.0333		108	40-150			

LCS (BGF0272-BS1)

Prepared & Analyzed: 06/08/23

Acenaphthene	0.0292	0.00500	mg/kg	0.0333		87.5	31-137			
Anthracene	0.0287	0.00500	"	0.0333		86.1	30-120			
Benzo (a) anthracene	0.0141	0.00500	"	0.0333		42.2	30-120			
Benzo (a) pyrene	0.0286	0.00500	"	0.0333		85.9	30-120			
Benzo (b) fluoranthene	0.0321	0.00500	"	0.0333		96.2	30-120			
Benzo (k) fluoranthene	0.0286	0.00500	"	0.0333		85.7	30-120			
Chrysene	0.0232	0.00500	"	0.0333		69.5	30-120			
Dibenz (a,h) anthracene	0.0301	0.00500	"	0.0333		90.3	30-120			
Fluoranthene	0.0280	0.00500	"	0.0333		84.1	30-120			
Fluorene	0.0278	0.00500	"	0.0333		83.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0309	0.00500	"	0.0333		92.7	30-120			
Pyrene	0.0329	0.00500	"	0.0333		98.6	35-142			
1-Methylnaphthalene	0.0164	0.00500	"	0.0333		49.2	35-142			
2-Methylnaphthalene	0.0237	0.00500	"	0.0333		71.2	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0252		"	0.0333		75.5	40-150			
Surrogate: Fluoranthene-d10	0.0285		"	0.0333		85.5	40-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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 BGF0272 - EPA 5030 Soil MS

Matrix Spike (BGF0272-MS1)

Source: 2305676-03

Prepared & Analyzed: 06/08/23

Acenaphthene	0.0217	0.00500	mg/kg	0.0333	ND	65.1	31-137			
Anthracene	0.0227	0.00500	"	0.0333	ND	68.1	30-120			
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.8	30-120			
Benzo (a) pyrene	0.0180	0.00500	"	0.0333	ND	53.9	30-120			
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.4	30-120			
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.5	30-120			
Chrysene	0.0180	0.00500	"	0.0333	ND	54.1	30-120			
Dibenz (a,h) anthracene	0.0154	0.00500	"	0.0333	ND	46.3	30-120			
Fluoranthene	0.0228	0.00500	"	0.0333	ND	68.3	30-120			
Fluorene	0.0219	0.00500	"	0.0333	ND	65.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0148	0.00500	"	0.0333	ND	44.3	30-120			
Pyrene	0.0234	0.00500	"	0.0333	ND	70.3	35-142			
1-Methylnaphthalene	0.0143	0.00500	"	0.0333	ND	43.0	15-130			
2-Methylnaphthalene	0.0223	0.00500	"	0.0333	ND	66.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0230		"	0.0333		69.0	40-150			
Surrogate: Fluoranthene-d10	0.0259		"	0.0333		77.7	40-150			

Matrix Spike Dup (BGF0272-MSD1)

Source: 2305676-03

Prepared & Analyzed: 06/08/23

Acenaphthene	0.0195	0.00500	mg/kg	0.0333	ND	58.5	31-137	10.6	30	
Anthracene	0.0202	0.00500	"	0.0333	ND	60.7	30-120	11.5	30	
Benzo (a) anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	3.64	30	
Benzo (a) pyrene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	3.18	30	
Benzo (b) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	4.57	30	
Benzo (k) fluoranthene	0.0164	0.00500	"	0.0333	ND	49.3	30-120	10.1	30	
Chrysene	0.0163	0.00500	"	0.0333	ND	49.0	30-120	9.81	30	
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.5	30-120	13.4	30	
Fluoranthene	0.0200	0.00500	"	0.0333	ND	59.9	30-120	13.2	30	
Fluorene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	10.4	30	
Indeno (1,2,3-cd) pyrene	0.0161	0.00500	"	0.0333	ND	48.4	30-120	8.86	30	
Pyrene	0.0211	0.00500	"	0.0333	ND	63.2	35-142	10.7	30	
1-Methylnaphthalene	0.0166	0.00500	"	0.0333	ND	49.7	15-130	14.4	50	
2-Methylnaphthalene	0.0203	0.00500	"	0.0333	ND	60.9	15-130	9.38	50	
Surrogate: 2-Methylnaphthalene-d10	0.0214		"	0.0333		64.3	40-150			
Surrogate: Fluoranthene-d10	0.0230		"	0.0333		69.1	40-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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 BGF0406 - EPA 3050B

Blank (BGF0406-BLK1)

Prepared: 06/12/23 Analyzed: 06/16/23

Boron ND 0.0100 mg/L

LCS (BGF0406-BS1)

Prepared: 06/12/23 Analyzed: 06/16/23

Boron 5.05 0.0100 mg/L 5.00 101 80-120

Duplicate (BGF0406-DUP1)

Source: 2306074-01

Prepared: 06/12/23 Analyzed: 06/16/23

Boron 0.115 0.0100 mg/L 0.125 8.48 20

Matrix Spike (BGF0406-MS1)

Source: 2306074-01

Prepared: 06/12/23 Analyzed: 06/16/23

Boron 4.89 0.0100 mg/L 5.00 0.125 95.3 75-125

Matrix Spike Dup (BGF0406-MSD1)

Source: 2306074-01

Prepared: 06/12/23 Analyzed: 06/16/23

Boron 4.98 0.0100 mg/L 5.00 0.125 97.2 75-125 1.89 25

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Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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

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

Batch BGF0402 - General Preparation

Blank (BGF0402-BLK1)

Prepared: 06/11/23 Analyzed: 06/18/23

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

LCS (BGF0402-BS1)

Prepared: 06/11/23 Analyzed: 06/18/23

Calcium	5.65	0.0500	mg/L wet	5.00	113	70-130
Magnesium	5.60	0.0500	"	5.00	112	70-130
Sodium	5.52	0.0500	"	5.00	110	70-130

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Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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

Summit Scientific

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

Batch BGF0404 - General Preparation

Duplicate (BGF0404-DUP1)		Source: 2306070-05			Prepared & Analyzed: 06/12/23					
% Solids	81.0		%		81.3			0.387	20	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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 BGF0410 - General Preparation

Blank (BGF0410-BLK1)

Prepared & Analyzed: 06/12/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGF0410-BS1)

Prepared & Analyzed: 06/12/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGF0410-DUP1)

Source: 2306070-05

Prepared & Analyzed: 06/12/23

Specific Conductance (EC) 2.00 0.0100 mmhos/cm 2.04 1.68 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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

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

Batch BGF0409 - General Preparation

LCS (BGF0409-BS1)

Prepared & Analyzed: 06/12/23

pH	9.01	pH Units	9.18	98.1	95-105
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Duplicate (BGF0409-DUP1)

Source: 2306070-05

Prepared & Analyzed: 06/12/23

pH	7.88	pH Units	7.84	0.509	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State GWS CC30-02

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/19/23 15:17

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